



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels, Jr.

Governor

Thomas W. Easterly

Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

VIA ELECTRONIC MAIL

August 17, 2000

Mr. Karl Back, Plant Manager
Hoosier Energy REC, Inc.
Merom Generating Station
5500 Old SR 54 West
Sullivan, Indiana 47882

Dear Mr. Southworth:

Re: Draft NPDES Permit No. IN0050296
Hoosier Energy REC, Inc.
Merom Generating Station
5500 Old SR 54 West
Sullivan, Indiana, Sullivan County

Your application and supporting documents have been reviewed and processed in accordance with rules adopted under 327 IAC 5. Enclosed is a copy of the draft NPDES Permit.

Pursuant to IC 13-15-5-1, IDEM will publish a general notice in the newspaper with the largest general circulation within the above county. A 30-day comment period is available in order to solicit input from interested parties, including the general public.

Please review this draft permit and associated documents carefully to become familiar with the proposed terms and conditions. Comments concerning the draft permit should be submitted in accordance with the procedure outlined in the enclosed public notice form. We suggest that you meet with us to discuss major concerns or objections you may have with the draft permit.

Questions concerning this draft permit may be addressed to Mr. George Oliver of my staff, at 317/232-8702.

Sincerely,

Stanley Rigney, Chief
Industrial NPDES Permits Section
Office of Water Quality

Enclosures

cc: Sullivan County Health Department
Mr. Sean Ramach, US EPA Region 5

STATE OF INDIANA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq., the "Act"), and IDEM's authority under IC13-15,

**HOOSIER ENERGY REC, INC.
MEROM GENERATING STATION**

is authorized to discharge from a coal fired steam electric generating station that is located at 5500 Old SR 54 West, three miles east of Merom, Indiana in Sullivan County to receiving waters named the Turtle Creek Reservoir and Turtle Creek in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II and III hereof.

Effective Date: _____

Expiration Date: _____

In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit such information and forms as are required by the Indiana Department of Environmental Management no later than 180 days prior to the date of expiration.

Signed on _____ for the Indiana Department of
Environmental Management.

Paul Higginbotham, Chief
Permits Branch
Office of Water Quality

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge from Outfall 001. The discharge consists predominantly of Condenser Cooling Water, Low Volume Wastewater, Metal Cleaning Waste, Sanitary Wastewater, Flue Gas Desulfurization (FGD) Process Overflow, Landfill Storm Water Runoff and Ground Water from the FGD and Landfill Areas. Internal Outfalls 101, 201, 301, and 401 also discharge to the reservoir by way of Outfall 001. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into Turtle Creek Reservoir, at the Northern End of the Discharge Canal or at the edge of a mixing zone approved in accordance with applicable federal and state laws, rules and regulations. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS[1][2][3]Discharge Canal
Outfall 001

Table 1

Parameter	Quantity or Loading		Units	Quality or Concentration		Units	Monitoring Measurement Frequency	Requirements Sample Type
	Monthly Average Report	Daily Maximum Report		Monthly Average	Daily Maximum			
Flow	Report	Report	MGD	----	-----	----	Daily	Continuous
Temperature Interim[4]	-----	-----	----	-----	Report	⁰ F	Daily	Continuous
Temperature[5]	-----	-----	----	Report	Report	⁰ F	Daily	Continuous

Table 2

Parameter	Quality or Concentration		Units	Monitoring Measurement Frequency	Requirements Sample Type
	Daily Minimum	Daily Maximum			
pH	6.0	9.0	s.u.	Weekly	Grab

[1] See Part I.B., Narrative Water Quality Standards.

[2] See Permit Part III (Other Requirements).

[3] In the event that changes are to be made in the use of water treatment additives including dosage rates contributing to Outfall 001, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives or dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.

[4] Interim Thermal Limitations shall apply at Outfall 002 in Part I.A.2. of this permit subject to the terms and conditions of the Compliance Schedule in Permit Part I.F.

[5] Temperature Requirements

- (a) The discharge from Outfall 001 shall not exceed the maximum limits in the following table more than one percent (1%) of the hours in the twelve (12) month period ending with any month. At no time shall the water temperature at such locations exceed the maximum limits in the following table by more than three degrees Fahrenheit (3°F).

Table 1

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
°F	50	50	60	70	80	90	90	90	90	78	70	57
°C	10	10	15.6	21.1	26.7	32.2	32.2	32.2	32.2	25.5	21.1	14

- (b) Temperature measurements shall be taken as determined at the end of the cooling water discharge canal to Turtle Creek Reservoir or at the edge of a mixing zone approved in accordance with applicable federal and state laws, rules and regulations.
- (c) Temperature measurements at the above approved location shall be recorded in one hour intervals. The highest single recorded measurement for each day shall be reported on the state monthly monitoring report for each day. The highest single recorded daily measurement shall be reported on the federal discharge monitoring report as the maximum daily temperature of that month.
- (d) The number of hours where the measured temperature at Outfall 001 exceeds the limits in Table 1 and the number of days where the measured temperature exceeds the limits in Table 1 by more than 3°F shall be reported on the state monthly monitoring report and the federal discharge monitoring report.
- (e) The cumulative number of hours where the temperature measurements at Outfall 001 exceed the limits in Table 1 during the most recent twelve (12) month period, beginning on the effective date of this permit, and shall be reported on the state monthly monitoring report and the federal discharge monitoring report every month. The most recent twelve (12) months shall include the current month and the previous eleven (11) months.
- (f) The permittee has a 3 year schedule of compliance as outlined in Part I.F. in which to meet the final effluent limitations for temperature.

2. During the period beginning on the effective date of this permit and lasting until the expiration of the Compliance Schedule, the permittee is authorized to monitor for compliance with the interim temperature limit at Outfall 002. The discharge consists predominantly of Condenser Cooling Water from the Turtle Creek Reservoir to Turtle Creek. Outfall 002 is the point of compliance for the interim thermal limits subject to terms and conditions of the Compliance Schedule in Permit Part I.F. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge from Turtle Creek Reservoir prior to entry into Turtle Creek. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS

Interim Thermal Discharge Outfall 002

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring</u>	<u>Requirements</u>
	<u>Monthly</u>	<u>Daily</u>		<u>Monthly</u>	<u>Daily</u>		<u>Measurement</u>	<u>Sample</u>
	<u>Average</u>	<u>Maximum</u>		<u>Average</u>	<u>Maximum</u>		<u>Frequency</u>	<u>Type</u>
Temperature[1]	-----	-----	-----	-----	Report	^o F	Daily	Continuous

[1] Temperature Requirements

- (a) The discharge from Outfall 002 shall not exceed the maximum limits in the following table more than one percent (1%) of the hours in the twelve (12) month period ending with any month. At no time shall the water temperature at such locations exceed the maximum limits in the following table by more than three degrees Fahrenheit (3°F).

Table 1

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
^o F	50	50	60	70	80	90	90	90	90	78	70	57
^o C	10	10	15.6	21.1	26.7	32.2	32.2	32.2	32.2	25.5	21.1	14

- (b) Temperature measurements shall be taken at the end of the continuous flow outlet pipe from Turtle Creek Reservoir to Turtle Creek.
- (c) The above temperature measurements shall be recorded in one hour intervals. The highest single recorded measurement for each day shall be reported on the state monthly monitoring report for each day. The highest single recorded daily measurement shall be reported on the federal discharge monitoring report as the maximum daily temperature of that month.
- (d) The number of hours where the measured temperature at Outfall 002 exceeds the limits in Table 1 and the number of days where the measured temperature exceeds the limits in Table 1 by more than 3°F shall be reported on the state monthly monitoring report and the federal discharge monitoring report.
- (e) The cumulative number of hours where the temperature measurements at Outfall 002 exceed the limits in Table 1 during the most recent twelve (12) months period shall be reported on the state monthly monitoring report and the federal discharge monitoring report every month. The most recent twelve (12) months shall include the current month and the previous eleven (11) months beginning on the effective date of this permit.

3. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge from Internal Outfall 101. The discharge is limited to Low Volume Waste and Metal Cleaning Waste. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Discharge Canal. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS
Low Volume Waste & Metal Cleaning Waste
Internal Outfall 101

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Table 1</u> <u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring</u> <u>Measurement</u> <u>Frequency</u>	<u>Requirements</u> <u>Sample</u> <u>Type</u>
	<u>Monthly</u>	<u>Daily</u>		<u>Monthly</u>	<u>Daily</u>			
	<u>Average</u>	<u>Maximum</u>		<u>Average</u>	<u>Maximum</u>			
Flow	Report	Report	MGD	----	----	----	Weekly	Estimate
TSS	-----	-----	----	30	100	mg/l	Weekly	Grab
Oil & Grease	-----	-----	----	10	15	mg/l	Weekly	Grab
Iron[1][2]	-----	-----	----	-----	1.0	mg/l	Daily	Grab
Copper[1][2]	-----	-----	----	-----	1.0	mg/l	Daily	Grab

Table 2					
Parameter	Quality or Concentration		Units	Monitoring	Requirements
	Daily	Daily		Measurement	Sample
	Minimum	Maximum		Frequency	Type
pH	6.0	9.0	s.u.	Weekly	Grab

[1] The permittee shall measure and report this parameter as total recoverable metals.

[2] Monitoring requirements are applicable only during periods of discharge of metal cleaning wastes.

4. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge from Internal Outfall 201. The discharge is limited to Sanitary Wastewater. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Discharge Canal. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONSSanitary Wastewater
Internal Outfall 201

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Table 1</u> <u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring</u> <u>Measurement</u> <u>Frequency</u>	<u>Requirements</u> <u>Sample</u> <u>Type</u>
	<u>Monthly</u>	<u>Daily</u>		<u>Monthly</u>	<u>Daily</u>			
	<u>Average</u> <u>Report</u>	<u>Maximum</u> <u>Report</u>		<u>Average</u>	<u>Maximum</u>			
Flow	-----	-----	MGD	-----	-----	----	Weekly	Estimate
TSS	-----	-----	----	12	18	mg/l	Weekly	Grab
CBOD5	-----	-----	----	10	15	mg/l	Weekly	Grab
Ammonia-N								
Summer[1]	-----	-----	----	1.1	1.6	mg/l	Weekly	Grab
Winter[2]	-----	-----	----	1.6	2.4	mg/l	Weekly	Grab

<u>Parameter</u>	<u>Table 2</u> <u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring</u> <u>Measurement</u> <u>Frequency</u>	<u>Requirements</u> <u>Sample</u> <u>Type</u>
	<u>Daily</u>	<u>Daily</u>			
	<u>Minimum</u>	<u>Maximum</u>			
pH	6.0	9.0	s.u.	2 x Weekly	Grab
TRC / Chlorine[3]	0.5	1.0	mg/l	2 x Weekly	Grab

[1] Summer is defined as the period from May 1 to November 30.

[2] Winter is defined as the period from December 1 to April 30.

[3] Effluent shall be disinfected on a continuous basis April 1 through October 31, annually. The practice of chlorination for any reason from November 1 through March 31 shall result in the maximum residual chlorine restrictions and monitoring requirements being effective whenever chlorine disinfection is employed. The chlorine residual shall be maintained at a concentration not to exceed a maximum of 1.0 mg/l nor a minimum of 0.5 mg/l as measured at the effluent end of the chlorine contact tank.

5. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge from Internal Outfall 301. The discharge is limited to Stormwater from the Landfill & FGD disposal facilities, FGD overflow from the processing area and Groundwater. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into Discharge Canal. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS[1]
Landfill and FGD Storm Water Runoff,
FGD Process Overflow & Groundwater
Internal Outfall 301

Table 1								
	Quantity or Loading			Quality or Concentration			Monitoring	Requirements
	Monthly	Daily		Monthly	Daily		Measurement	Sample
<u>Parameter</u>	<u>Average</u>	<u>Maximum</u>	<u>Units</u>	<u>Average</u>	<u>Maximum</u>	<u>Units</u>	<u>Frequency</u>	<u>Type</u>
Flow	Report	Report	MGD	-----	-----	----	Weekly	Estimate
Total Suspended solids (TSS)	-----	-----	----	-----	50	mg/l	Weekly	Grab
Sulfate	-----	-----	----	-----	Report	mg/l	Monthly	Grab
Chloride	-----	-----	----	-----	Report	mg/l	Monthly	Grab
Arsenic[2]	-----	-----	----	-----	Report	mg/l	Monthly	Grab
Cadmium[2]	-----	-----	----	-----	Report	mg/l	Monthly	Grab
Chromium[2]	-----	-----	----	-----	Report	mg/l	Monthly	Grab
Copper[2]	-----	-----	----	-----	Report	mg/l	Monthly	Grab
Lead[2]	-----	-----	----	-----	Report	mg/l	Monthly	Grab
Nickel[2]	-----	-----	----	-----	Report	mg/l	Monthly	Grab
Selenium[2]	-----	-----	----	-----	Report	mg/l	Monthly	Grab
Zinc[2]	-----	-----	----	-----	Report	mg/l	Monthly	Grab

Quality or Concentration			Monitoring		Requirements
Parameter	Daily	Daily	Measurement	Frequency	Sample
	<u>Minimum</u>	<u>Maximum</u>			<u>Type</u>
pH	6.0	9.0	Weekly		Grab

[1] The Storm Water Monitoring and Non Numeric Effluent Limits and the Storm Water Pollution Prevention Plan (SWP3) requirements can be found in Part I.D. and Part I.E. of this permit.

[2] The permittee shall measure and report the identified metals as total recoverable metals.

6. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge from Internal Outfall 401. The discharge is limited to Landfill Stormwater Runoff and landfill Groundwater. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the discharge canal. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS[1]
Landfill Storm Water Runoff and Groundwater
Internal Outfall 401

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Table 1</u> <u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring</u> <u>Measurement</u> <u>Frequency</u>	<u>Requirements</u> <u>Sample</u> <u>Type</u>
	<u>Monthly</u> <u>Average</u> <u>Report</u>	<u>Daily</u> <u>Maximum</u> <u>Report</u>		<u>Monthly</u> <u>Average</u> <u>-----</u>	<u>Daily</u> <u>Maximum</u> <u>-----</u>			
Flow			MGD				Weekly	Estimate
Total Suspended Solids(TSS)	-----	-----	----	-----	50	mg/l	Weekly	Grab
Sulfate	-----	-----	----	-----	Report	mg/l	Monthly	Grab
Chloride	-----	-----	----	-----	Report	mg/l	Monthly	Grab
Arsenic[2]	-----	-----	----	-----	Report	mg/l	Monthly	Grab
Cadmium[2]	-----	-----	----	-----	Report	mg/l	Monthly	Grab
Chromium[2]	-----	-----	----	-----	Report	mg/l	Monthly	Grab
Copper[2]	-----	-----	----	-----	Report	mg/l	Monthly	Grab
Lead[2]	-----	-----	----	-----	Report	mg/l	Monthly	Grab
Nickel[2]	-----	-----	----	-----	Report	mg/l	Monthly	Grab
Selenium[2]	-----	-----	----	-----	Report	mg/l	Monthly	Grab
Zinc[2]	-----	-----	----	-----	Report	mg/l	Monthly	Grab

<u>Parameter</u>	<u>Table 2</u> <u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring</u> <u>Measurement</u> <u>Frequency</u>	<u>Requirements</u> <u>Sample</u> <u>Type</u>
	<u>Daily</u> <u>Minimum</u>	<u>Daily</u> <u>Maximum</u>			
pH	6.0	9.0	s.u.	Weekly	Grab

[1] The Storm Water Monitoring and Non Numeric Effluent Limits and the Storm Water Pollution Prevention Plan (SWP3) requirements can be found in Part I.D. and Part I.E. of this permit.

[2] The permittee shall measure and report the identified metals as total recoverable metals.

7. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge Storm Water from Outfalls identified as 001S, 002S, 003S, 004S and 005S and overflow from the potable water storage tank from Outfall 003S. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Turtle Creek Reservoir.

Storm Water

Outfalls 001S, 002S, 003S, 004S, 005S

Sampling and Monitoring Requirements[1][2][3]

<u>Parameter</u>	<u>Quantity or Concentration</u>		<u>Monitoring Requirements</u>	
	<u>Daily Maximum Report</u>	<u>Units</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Report	MGD	Annually	Estimated Total
Total Suspended Solids	Report	mg/l	Annually	Grab
Oil & Grease	Report	mg/l	Annually	Grab
CBOD5	Report	mg/l	Annually	Grab
COD	Report	mg/l	Annually	Grab
Total Kjeldahl Nitrogen (TKN)	Report	mg/l	Annually	Grab
Nitrate plus Nitrite Nitrogen	Report	mg/l	Annually	Grab
Total Phosphorus	Report	mg/l	Annually	Grab
pH	Report	s.u.	Annually	Grab

[1] See Part I.B. of the permit for the Narrative Water Quality Standards

[2] The Storm Water Monitoring and Non Numeric Effluent Limits and the Storm Water Pollution Prevention Plan (SWP3) requirements can be found in Part I.D. and Part I.E. of this permit.

[3] All samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. There shall be a minimum of three (3) months between reported sampling events.

For each sample taken, the permittee shall record the duration and total rainfall of the storm event, the number of hours between beginning of the storm measured and the end of the previous measurable rain event, and the outside temperature at the time of sampling.

A grab sample shall be taken during the first thirty (30) minutes of the discharge (or as soon thereafter as practicable).

B. NARRATIVE WATER QUALITY STANDARDS

At all times the discharge from any and all point sources specified within this permit shall not cause receiving waters:

1. including the mixing zone, to contain substances, materials, floating debris, oil, scum, or other pollutants:
 - a. that will settle to form putrescent or otherwise objectionable deposits;
 - b. that are in amounts sufficient to be unsightly or deleterious;
 - c. that produce color, visible oil sheen, odor, or other conditions in such degree as to create a nuisance;
 - d. which are in amounts sufficient to be acutely toxic to , or to otherwise severely injure or kill aquatic life, other animals, plants, or humans;
 - e. which are in concentrations or combinations that will cause or contribute to the growth of aquatic plants or algae to such a degree as to create a nuisance, be unsightly, or otherwise impair the designated uses.
2. At all times, all waters outside the mixing zone, to contain substances in concentrations which on the basis of available scientific data are believed to be sufficient to injure, be chronically toxic to, or be carcinogenic, mutagenic, or teratogenic to humans, animals, aquatic life, or plants

C. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge flow and shall be taken at times which reflect the full range and concentration of effluent parameters normally expected to be present. Samples shall not be taken at times to avoid showing elevated levels of any parameters.
2. Discharge Monitoring Reports
 - a. Calculations that require averaging of measurements of daily values (both concentrations and mass) shall use an arithmetic mean, except the monthly average for E. Coli shall be calculated as a geometric mean.
 - b. Daily effluent values (both mass and concentration) that are less than the LOQ that are used to determine the monthly average effluent level shall be accommodated in calculation of the average using statistical methods that have been approved by the Commissioner.

- c. Effluent concentrations less than the LOD shall be reported on the Discharge Monitoring Report (DMR) forms as < (less than) the value of the LOD. For example, if a substance is not detected at a concentration of 0.1 µg/l, report the value as <0.1 µg/l.
- d. Effluent concentrations greater than or equal to the LOD and less than the LOQ that are reported on a DMR shall be reported as the actual value and annotated on the DMR to indicate that the value is not quantifiable.
- e. Mass discharge values which are calculated from concentrations reported as less than the value of the limit of detection shall be reported as less than the corresponding mass discharge value.
- f. Mass discharge values that are calculated from effluent concentrations greater than the limit of detection shall be reported as the calculated value.

The permittee shall submit federal and state discharge monitoring reports to the Indiana Department of Environmental Management containing results obtained during the previous month which shall be postmarked no later than the 28th day of the month following each completed monitoring period. The first report shall be submitted by the 28th day of the month following the month in which the permit becomes effective.

The Regional Administrator may request the permittee to submit monitoring reports to the Environmental Protection Agency if it is deemed necessary to assure compliance with the permit.

3. Definitions

- a. "Monthly Average" means the total mass or flow-weighted concentration of all daily discharges during a calendar month on which daily discharges are sampled or measured, divided by the number of daily discharges sampled and/or measured during such calendar month. The monthly average discharge limitation is the highest allowable average monthly discharge for any calendar month.
- b. "Daily Discharge" means the total mass of a pollutant discharged during the calendar day or, in the case of a pollutant limited in terms other than mass pursuant to 327 IAC 5-2-11(e), the average concentration or other measurement of the pollutant specified over the calendar day or any twenty-four hour period that reasonably represents the calendar day for the purposes of sampling.
- c. "Daily Maximum" means the maximum allowable daily discharge for any calendar day.

- d. A "24-hour composite sample" means a sample consisting of at least 3 individual flow-proportioned samples of wastewater, taken by the grab sample method or by an automatic sampler, which are taken at approximately equally spaced time intervals for the duration of the discharge within a 24-hour period and which are combined prior to analysis. A flow-proportioned composite sample may be obtained by:
- (1) recording the discharge flow rate at the time each individual sample is taken,
 - (2) adding together the discharge flow rates recorded from each individual sampling time to formulate the "total flow" value,
 - (3) the discharge flow rate of each individual sampling time is divided by the total flow value to determine its percentage of the total flow value,
 - (4) then multiply the volume of the total composite sample by each individual sample's percentage to determine the volume of that individual sample which will be included in the total composite sample.
- e. "Concentration" means the weight of any given material present in a unit volume of liquid. Unless otherwise indicated in this permit, concentration values shall be expressed in milligrams per liter (mg/l).
- f. The "Regional Administrator" is defined as the Region V Administrator, U.S. EPA, located at 77 West Jackson Boulevard, Chicago, Illinois 60604.
- g. The "Commissioner" is defined as the Commissioner of the Indiana Department of Environmental Management, which is located at the following address: 100 North Senate Avenue, Indianapolis, Indiana 46204.
- h. "Limit of Detection" or "LOD" means the minimum concentration of a substance that can be measured and reported with ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) for a particular analytical method and sample matrix.
- i. "Limit of Quantitation" or "LOQ" means a measurement of the concentration of a contaminant obtained by using a specified laboratory procedure calibrated at a specified concentration above the method detection level. It is considered the lowest concentration at which a particular contaminant can be quantitatively measured using a specified laboratory procedure for monitoring of the contaminant. This term is also sometimes called limit quantification or quantification level.

- j. "Method Detection Level" or "MDL" means the minimum concentration of an analyte (substance) that can be measured and reported with a ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) as determined by procedure set forth in 40 CFR 136, Appendix B. The method detection level or MDL is equivalent to the LOD.
- k. "Grab Sample" means a single sample collected at a particular time and place that represents the composition of the water only at that time and place.

4. Test Procedure

The analytical and sampling methods used shall conform to the current version of 40 CFR 136. Multiple editions of Standard Methods for the Examination of Water and Wastewater are currently approved for most methods, however, 40 CFR Part 136 should be checked to ascertain if a particular method is approved for a particular analyte. The approved methods may be included in the texts listed below. However, different but equivalent methods are allowable if they receive the prior written approval of the Commissioner and the U.S. Environmental Protection Agency.

- a. Standard Methods for the Examination of Water and Wastewater
18th, 19th, or 20th Editions, 1992, 1995, or 1998, American Public Health Association, Washington, D.C. 20005.
- b. A.S.T.M. Standards, Parts 23, Water; Atmosphere Analysis
1972 American Society for Testing and Materials, Philadelphia, PA 19103.
- c. Methods for Chemical Analysis of Water and Wastes
June 1974, Revised, March 1983, Environmental Protection Agency, Water Quality Office, Analytical Quality Control Laboratory, 1014 Broadway, Cincinnati, OH 45202.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling;
- b. The person(s) who performed the sampling or measurements;
- c. The dates the analyses were performed;
- d. The person(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The results of all required analyses and measurements.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of this monitoring shall be included in the calculation and reporting of the values required in the monthly Discharge Monitoring Report (DMR). Such increased frequency shall also be indicated. Other monitoring data not specifically required in this permit (such as internal process or internal waste stream data) which is collected by or for the permittee need not be submitted unless requested by the Commissioner.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed and calibration and maintenance of instrumentation and recording from continuous monitoring instrumentation, shall be retained for a minimum of three (3) years. In cases where the original records are kept at another location, a copy of all such records shall be kept at the permitted facility. The three years shall be extended:

- a. automatically during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or regarding promulgated effluent guidelines applicable to the permittee; or
- b. as requested by the Regional Administrator or the Indiana Department of Environmental Management.

D. STORM WATER MONITORING AND NON-NUMERIC EFFLUENT LIMITS

Beginning on the effective date of the permit, the permittee shall conduct storm water monitoring for the storm water discharge points listed in Part I.A.5, 6, and 7 of the permit to be conducted on an annual basis.

1. Control Measures and Effluent Limits

In the technology-based limits included in Part D.2-4., the term "minimize" means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice.

2. Control Measures

Select, design, install, and implement control measures (including best management practices) to address the selection and design considerations in Part D.3 to meet the non-numeric effluent limits in Part D.4. The selection, design, installation, and implementation of

these control measures must be in accordance with good engineering practices and manufacturer's specifications. Any deviation from the manufacturer's specifications shall be documented. If the control measures are not achieving their intended effect in minimizing pollutant discharges, the control measures must be modified as expeditiously as practicable. Regulated stormwater discharges from the facility include stormwater run-on that commingles with stormwater discharges associated with industrial activity at the facility.

3. Control Measure Selection and Design Considerations

When selecting and designing control measures consider the following:

- a. preventing stormwater from coming into contact with polluting materials is generally more effective, and cost-effective, than trying to remove pollutants from stormwater;
- b. use of control measures in combination is more effective than use of control measures in isolation for minimizing pollutants in stormwater discharge;
- c. assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures that will achieve the limits in this permit;
- d. minimizing impervious areas at your facility and infiltrating runoff onsite (including bioretention cells, green roofs, and pervious pavement, among other approaches) can reduce runoff and improve groundwater recharge and stream base flows in local streams, although care must be taken to avoid ground water contamination;
- e. flow can be attenuated by use of open vegetated swales and natural depressions;
- f. conservation and/or restoration of riparian buffers will help protect streams from stormwater runoff and improve water quality; and
- g. use of treatment interceptors (e.g., swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

4. Technology-Based Effluent Limits (BPT/BAT/BCT): Non-Numeric Effluent Limits

a. Minimize Exposure

Minimize the exposure of raw, final, or waste materials to rain, snow, snowmelt, and runoff. To the extent technologically available and economically practicable and achievable, either locate industrial materials and activities inside or protect them with storm resistant coverings in order to minimize exposure to rain, snow, snowmelt, and runoff (although significant enlargement of impervious surface area is not recommended). In minimizing exposure, pay particular attention to the following areas:

Loading and unloading areas: locate in roofed or covered areas where feasible; use grading, berming, or curbing around the loading area to divert run-on; locate the loading and unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems.

Material storage areas: locate indoors, or in roofed or covered areas where feasible; install berms/dikes around these areas; use dry cleanup methods.

Note: Industrial materials do not need to be enclosed or covered if stormwater runoff from affected areas will not be discharged to receiving waters.

b. Good Housekeeping

Keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals, keeping materials orderly and labeled, and stowing materials in appropriate containers.

As part of the developed good housekeeping program, include a cleaning and maintenance program for all impervious areas of the facility where particulate matter, dust, or debris may accumulate, especially areas where material loading and unloading, storage, handling, and processing occur; and where practicable, the paving of areas where vehicle traffic or material storage occur but where vegetative or other stabilization methods are not practicable (institute a sweeping program in these areas too). For unstabilized areas where sweeping is not practicable, consider using stormwater

management devices such as sediment traps, vegetative buffer strips, filter fabric fence, sediment filtering boom, gravel outlet protection, or other equivalent measures that effectively trap or remove sediment.

c. Maintenance

Maintain all control measures which are used to achieve the effluent limits required by this permit in effective operating condition. Nonstructural control measures must also be diligently maintained (e.g., spill response supplies available, personnel appropriately trained). If control measures need to be replaced or repaired, make the necessary repairs or modifications as expeditiously as practicable.

d. Spill Prevention and Response Procedures

You must minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur. At a minimum, you must implement:

- (1) Procedures for plainly labeling containers (e.g., "Used Oil", "Spent Solvents", "Fertilizers and Pesticides", etc.) that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;
- (2) Preventive measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;
- (3) Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect or respond to a spill or lead must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of your storm water pollution prevention team; and
- (4) Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies. State or local requirements may necessitate reporting spills or discharges to local emergency response, public health, or drinking water supply agencies. Contact

information must be in locations that are readily accessible and available.

- (5) Procedures for documenting where potential spills and leaks could occur that could contribute pollutants to stormwater discharges, and the corresponding outfalls that would be affected by such spills and leaks.
- (6) A procedure for documenting all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a stormwater conveyance.

e. Erosion and Sediment Controls

Through the use of structural and/or non-structural control measures stabilize, and contain runoff from, exposed areas to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants. Among other actions to meet this limit, place flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion and/or settle out pollutants. In selecting, designing, installing, and implementing appropriate control measures, you are encouraged to check out information from both the State and EPA websites. The following two websites are given as information sources:

<http://www.in.gov/idem/4899.htm> and
<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm>

f. Management of Runoff

Divert, infiltrate, reuse, contain or otherwise reduce stormwater runoff, to minimize pollutants in the discharge.

g. Salt Storage Piles or Piles Containing Salt

Enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. You must implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Piles do not need to be enclosed or covered if storm water runoff from the piles is not discharged.

h. Waste, Garbage, and Floatable Debris

Ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged.

i. Employee Training

Train all employees who work in areas where industrial material or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of your Pollution Prevention Team. Training must cover the specific control measures used to achieve the effluent limits in this part, and monitoring, inspection, planning, reporting, and documentation requirements in other parts of this permit.

j. Non-Stormwater Discharges

You must determine if any non-stormwater discharges not authorized by an NPDES permit exist. Any non-stormwater discharges discovered must either be eliminated or modified into this permit.

k. Dust Generation and Vehicle Tracking of Industrial Materials

You must minimize generation of dust and off-site tracking of raw, final, or waste materials.

l. Fugitive Dust Emission.

Minimize fugitive dust emissions from coal handling areas. To minimize the tracking of coal dust offsite, consider procedures such as installing specially designed tires or washing vehicles in a designated area before they leave the site and controlling the wash water.

m. Delivery Vehicles

Minimize contamination of stormwater runoff from delivery vehicles arriving at the plant site. Consider procedures to inspect delivery vehicles arriving at the plant site and ensure overall integrity of the body or container and procedures to deal with leakage or spillage from vehicles or containers.

n. Fuel Oil Unloading Areas

Minimize contamination of precipitation or surface runoff from fuel oil unloading areas. Consider using containment curbs in unloading areas, having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up, and using spill and overflow protection devices (e.g., drip pans, drip diapers, or other containment devices placed beneath fuel oil connectors to contain potential spillage during deliveries or from leaks at the connectors).

o. Chemical Loading and Unloading

Minimize contamination of precipitation or surface runoff from chemical loading and unloading areas. Consider using containment curbs at chemical loading and unloading areas to contain spills, having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up, and loading and unloading in covered areas and storing chemicals indoors.

p. Miscellaneous Loading and Unloading Areas

Minimize contamination of precipitation or surface runoff from loading and unloading areas. Consider covering the loading area; grading, berming, or curbing around the loading area to divert runoff; locating the loading and unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems; or equivalent procedures.

q. Liquid Storage Tanks

Minimize contamination of surface runoff from above-ground liquid storage tanks. Consider protective guards around tanks, containment curbs, spill and overflow protection, dry cleanup methods, or equivalent measures.

r. Large Bulk Fuel Storage Tanks

Minimize contamination of surface runoff from large bulk fuel storage tanks. Consider containment berms (or their equivalent). You must also comply with applicable State and Federal laws,

including Spill Prevention, Control and Countermeasure (SPCC) Plan requirements.

s. Spill Reduction Measures

Minimize the potential for an oil or chemical spill, or reference the appropriate part of your SPCC plan. Visually inspect as part of your routine facility inspection the structural integrity of all above-ground tanks, pipelines, pumps, and related equipment that may be exposed to stormwater, and make any necessary repairs immediately.

t. Oil-Bearing Equipment in Switchyards

Minimize contamination of surface runoff from oil-bearing equipment in switchyard areas. Consider using level grades and gravel surfaces to retard flows and limit the spread of spills, or collecting runoff in perimeter ditches.

u. Residue-Hauling Vehicles

Inspect all residue-hauling vehicles for proper covering over the load, adequate gate sealing, and overall integrity of the container body. Repair vehicles without load covering or adequate gate sealing, or with leaking containers or beds.

v. Ash Loading Areas

Reduce or control the tracking of ash and residue from ash loading areas. Clear the ash building floor and immediately adjacent roadways of spillage, debris, and excess water as practicable.

w. Areas Adjacent to Disposal Ponds or Landfills

Minimize contamination of surface runoff from areas adjacent to disposal ponds or landfills. Reduce ash residue that may be tracked on to access roads traveled by residue handling vehicles, and reduce ash residue on exit roads leading into and out of residue handling areas.

x. Landfills, Scrap yards, Surface Impoundments, Open Dumps, General Refuse Sites

Minimize the potential for contamination of runoff from these areas.

5. Corrective Actions – Conditions Requiring Review

If any of the following conditions occur, you must review and revise the selection, design, installation, and implementation of your control measures to ensure that the condition is eliminated and will not be repeated (except for f, which may or may not require changes):

- a. an authorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this NPDES permit) occurs at this facility;
- b. a discharge that violates a numeric effluent limit;
- c. it is determined that your control measures are not stringent enough to for the discharge to meet applicable water quality standards;
- d. an inspection at your facility determines that modifications to the control measures are necessary to meet the non-numeric effluent limits in this permit;
- e. it is determined in your routine facility inspection or an inspection by EPA or IDEM that modifications to the control measures are necessary to meet the non-numeric effluent limits in this permit; or
- f. construction or a change in design, operation, or maintenance at your facility that significantly changes the nature of pollutants discharged in stormwater from your facility, or significantly increases the quantity of pollutants discharge.
- g. Upon written notice by the Commissioner that the SWP3 proves to be ineffective in controlling pollutants in storm water discharges exposed to industrial activity.

6. Corrective Action Deadlines

You must document your discovery of any of the conditions listed in Part I.D.5 within thirty (30) days of making such discovery. Subsequently, within one-hundred and twenty (120) days of such discovery, you must document any corrective action(s) to be taken to eliminate or further investigate the deficiency or if no corrective action is needed, the basis for that determination. Specific documentation required within 30 and 120 days is detailed below. If you determine that changes to your control measures are necessary following your review, any modifications to your control measures must be made before the next storm event if possible, or as soon as practicable following that storm event. These time intervals are

not grace periods, but schedules considered reasonable for the documenting of your findings and for making repairs and improvements. They are included in this permit to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely.

7. Corrective Action Report

Within 30 days of a discovery of any condition listed in Part I.D.5, you must document the following information:

- a. Brief description of the condition triggering corrective action;
- b. Date condition identified; and
- c. How deficiency identified.

Within 120 days of discovery of any condition listed in Part I.D.5, you must document the following information:

- a. Summary of corrective action taken or to be taken (or, for triggering events identified in Part I.D.5.f, where you determine that corrective action is not necessary, the basis for this determination)
- b. Notice of whether SWPPP modifications are required as a result of this discovery or corrective action;
- c. Date corrective action initiated; and
- d. Date corrective action completed or expected to be completed.

8. Inspections

The inspections in Parts D.8. must be conducted at this facility.

- a. At a minimum, quarterly inspection of the stormwater management measures and stormwater run-off conveyances. The routine inspections must be performed by qualified personnel with at least one member of your storm water pollution prevention team. Inspections must be documented and either contained in, or have the on-site record keeping location referenced in, the SWP3.
- b. Routine Facility Inspection Documentation – You must document the findings of each routine facility inspection performed and maintain this documentation with your SWPPP or have the on-site

record keeping location referenced in the SWPPP. At a minimum, your documentation must include:

- (1) The inspection date and time;
- (2) The name(s) and signature(s) of the inspectors;
- (3) Weather information and a description of any discharges occurring at the time of the inspection;
- (4) Any previously unidentified discharges of pollutants from the site;
- (5) Any control measures needing maintenance or repairs;
- (6) Any failed control measures that need replacement;
- (7) Any incidents of noncompliance observed; and
- (8) Any additional control measures needed to comply with the permit requirements.

Any corrective action required as a result of a routine facility inspection must be performed consistent with Part I.D.5 of this permit.

c. Comprehensive Site Compliance Evaluation

Qualified personnel shall conduct a comprehensive site compliance evaluation, at least once per year, to confirm the accuracy of the description of potential pollution sources contained in the plan, determine the effectiveness of the plan, and assess compliance with the permit. Such evaluations shall provide:

- (1) Areas contributing to a stormwater discharge associated with industrial activity shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A

visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.

As part of the routine inspections, address all potential sources of pollutants, including (if applicable) air pollution control equipment (e.g., baghouses, electrostatic precipitator, scrubbers, and cyclones), for any signs of degradation (e.g., leaks, corrosion, or improper operation) that could limit their efficiency and lead to excessive emissions. Considering monitoring air flow at inlets and outlets (or use equivalent measures) to check for leaks (e.g., particulate deposition) or blockage in ducts. Also inspect all process and material handling equipment (e.g., conveyors, cranes, and vehicles) for leaks, drips, or the potential loss of material; and material storage areas (e.g., piles, bins, or hoppers for storing coke, coal, scrap, or slag, as well as chemicals stored in tanks and drums) for signs of material loss due to wind or stormwater runoff.

- (2) Comprehensive Site Compliance Inspection. As part of your inspection, inspect the following areas monthly: coal handling areas, loading or unloading areas, switchyards, fueling areas, bulk storage areas, ash handling areas, areas adjacent to disposal ponds and landfills, maintenance areas, liquid storage tanks, and long term and short term material storage areas.
- (3) Based on the results of the evaluation, the description of potential pollutant sources identified in the plan in accordance with Part I.E.2.b of this permit and pollution prevention measures and controls identified in the plan in accordance with Part I.D.4. of this permit shall be revised as appropriate within the timeframes contained in Part I.D.6 of this permit.
- (4) A report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with the above paragraph must be documented and either contained in, or have on-site record keeping location referenced in, the SWP3 at least 3 years after the date of the evaluation. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that

the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with the signatory requirements of Part II.C.6 of this permit.

- (5) Where compliance evaluation schedules overlap the inspections required under Part I.E.2.c.(1)(D), the compliance evaluation may be conducted in place of one such inspection.

E. STORM WATER POLLUTION PREVENTION PLAN

1. Development of Plan

Within 12 months from the effective date of this permit, the permittee is required to revise and update the current Storm Water Pollution Prevention Plan (SWP3) for the permitted facility. The plan shall at a minimum include the following:

- a. Identify potential sources of pollution, which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. Storm water associated with industrial activity (defined in 40 CFR 122.26(b)(14)) includes, but is not limited to, the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing or materials storage areas at an industrial plant;
- b. Describe practices and measure to be used in reducing the potential for pollutants to be exposed to storm water; and
- c. Assure compliance with the terms and conditions of this permit.

2. Contents

The plan shall include, at a minimum, the following items:

- a. Pollution Prevention Team -The plan shall list, by position title, the member or members of the facility organization as members of a storm water Pollution Prevention Team who are responsible for developing the storm water pollution prevention plan (SWP3) and assisting the facility or plant manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each storm water pollution prevention team member. Each member of the stormwater pollution prevention team must have ready access to either an electronic or paper copy

of applicable portions of this permit and your SWPPP.

- b. Description of Potential Pollutant Sources – The plan shall provide a description of areas at the site exposed to industrial activity and have a reasonable potential for storm water to be exposed to pollutants. The plan shall identify all activities and significant materials (defined in 40 CFR 122.26(b)), which may potentially be significant pollutant sources. As a minimum, the plan shall contain the following:

- (1) A soils map indicating the types of soils found on the facility property and showing the boundaries of the facility property.
- (2) A graphical representation, such as an aerial photograph or site layout maps, drawn to an appropriate scale, which contains a legend and compass coordinates, indicating, at a minimum, the following:
 - (A) All on-site storm water drainage and discharge conveyances, which may include pipes, ditches, swales, and erosion channels, related to a storm water discharge.
 - (B) Known adjacent property drainage and discharge conveyances, if directly associated with run-off from the facility.
 - (C) All on-site and known adjacent property water bodies, including wetlands and springs.
 - (D) An outline of the drainage area for each outfall.
 - (E) An outline of the facility property, indicating directional flows, via arrows, of surface drainage patterns.
 - (F) An outline of impervious surfaces, which includes pavement and buildings, and an estimate of the impervious and pervious surface square footage for each drainage area placed in a map legend.

- (G) On-site injection wells, as applicable.
- (H) On-site wells used as potable water sources, as applicable.
- (I) All existing major structural control measures to reduce pollutants in storm water run-off.
- (J) All existing and historical underground or aboveground storage tank locations, as applicable.
- (K) All permanently designated plowed or dumped snow storage locations.
- (L) All loading and unloading areas for solid and liquid bulk materials.
- (M) All existing and historical outdoor storage areas for raw materials, intermediary products, final products, and waste materials. Include materials handled at the site that potentially may be exposed to precipitation or runoff, areas where deposition of particulate matter from process air emissions or losses during material-handling activities.
- (N) All existing or historical outdoor storage areas for fuels, processing equipment, and other containerized materials, for example, in drums and totes.
- (O) Outdoor processing areas.
- (P) Dust or particulate generating process areas.
- (Q) Outdoor assigned waste storage or disposal areas.
- (R) Pesticide or herbicide application areas.
- (S) Vehicular access roads.
- (T) Identify any storage or disposal of wastes such as spent solvents and baths, sand, slag and dross; liquid storage tanks and drums; processing areas including pollution control equipment (e.g., baghouses); and storage areas of raw material such

as coal, coke, scrap, sand, fluxes, refractories, or metal in any form. In addition, indicate where an accumulation of significant amounts of particulate matter could occur from such sources as furnace or oven emissions, losses from coal and coke handling operation, etc., and could result in a discharge of pollutants.

- (U) The mapping of historical locations is only required if the historical locations have a reasonable potential for stormwater exposure to historical pollutants.

- (3) An area site map that indicates:

- (A) The topographic relief or similar elevations to determine surface drainage patterns;
- (B) The facility boundaries;
- (C) All receiving waters; and
- (D) All known drinking water wells; and

Includes at a minimum, the features in clauses (A), (C), and (D) within a one-fourth (1/4) mile radius beyond the property boundaries of the facility. This map must be to scale and include a legend and compass coordinates.

- (4) A narrative description of areas that generate stormwater discharges exposed to industrial activity including descriptions for any existing or historical areas listed in subdivision 2.b.(2)(J) through (S) of this Part, and any other areas thought to generate storm water discharges exposed to industrial activity. The narrative descriptions for each identified area must include the following:

- (A) Type and typical quantity of materials present in the area.
- (B) Methods of storage, including presence of any secondary containment measures.

- (C) Any remedial actions undertaken in the area to eliminate pollutant sources or exposure of storm water to those sources. If a corrective action plan was developed, the type of remedial action and plan date shall be referenced.
- (D) Any significant release or spill history dating back a period of three (3) years from the effective date of this permit, in the identified area, for materials spilled outside of secondary containment structures and impervious surfaces in excess of their reportable quantity, including the following:
 - i. The date and type of material released or spilled.
 - ii. The estimated volume released or spilled.
 - iii. A description of the remedial actions undertaken, including disposal or treatment.

Depending on the adequacy or completeness of the remedial actions, the spill history shall be used to determine additional pollutant sources that may be exposed to storm water. In subsequent permit terms, the history shall date back for a period of five (5) years from the date of the permit renewal application.

- (E) Where the chemicals or materials have the potential to be exposed to storm water discharges, the descriptions for each identified area must include a risk identification analysis of chemicals or materials stored or used within the area. The analysis must include the following:
 - i. Toxicity data of chemicals or materials used within the area, referencing appropriate material safety data sheet information locations.

- ii. The frequency and typical quantity of listed chemicals or materials to be stored within the area.
 - iii. Potential ways in which storm water discharges may be exposed to listed chemicals and materials.
 - iv. The likelihood of the listed chemicals and materials to come into contact with water.
- (5) A narrative description of existing and planned management practices and measures to improve the quality of storm water run-off entering a water of the state. Descriptions must be created for existing or historical areas listed in subdivision 2.b.(2)(J) through (S) and any other areas thought to generate storm water discharges exposed to industrial activity. The description must include the following:
- (A) Any existing or planned structural and nonstructural control practices and measures.
 - (B) Any treatment the storm water receives prior to leaving the facility property or entering a water of the state.
 - (C) The ultimate disposal of any solid or fluid wastes collected in structural control measures other than by discharge.
- (6) Describe areas that due to topography, activities, or other factors have a high potential for significant soil erosion.
- (7) Document the location of any storage piles containing salt used for deicing.
- (8) Information or other documentation required under subsection (d) of this plan.
- (9) The results of stormwater monitoring. The monitoring data must include completed field data sheets, chain-of-custody forms, and laboratory results. If the monitoring data are not placed into the facility's SWP3, the on-site location for storage of the information must be reference in the SWP3.

- (10) Drainage Area Site Map. Document in your SWPPP the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff: storage tanks, scrap yards, and general refuse areas; short- and long-term storage of general materials (including but not limited to supplies, construction materials, paint equipment, oils, fuels, used and unused solvents, cleaning materials, paint, water treatment chemicals, fertilizer, and pesticides); landfills and construction sites; and stock pile areas (e.g., coal or limestone piles).
 - (11) Documentation of Good Housekeeping Measures. You must document in your SWPPP the good housekeeping measures implemented to meet the effluent limits in Part I.D.4 of this NPDES permit.
- c. Non-Stormwater Discharges – You must document that you have evaluated for the presence of non-storm water discharges not authorized by an NPDES permit. Any non-stormwater discharges have either been eliminated or incorporated into this permit. Documentation of non-storm water discharges shall include:
- (1) A written non-storm water assessment, including the following:
 - (A) A certification letter stating that storm water discharges entering a water of the state have been evaluated for the presence of illicit discharges and non-stormwater contributions.
 - (B) Detergent or solvent-based washing of equipment or vehicles that would allow washwater additives to enter any storm water only drainage system shall not be allowed at this facility unless appropriately permitted under this NPDES permit.
 - (C) All interior maintenance area floor drains with the potential for maintenance fluids or other materials to enter stormwater only storm sewers must be either sealed, connected to a sanitary sewer with prior authorization, or appropriately permitted under this NPDES permit. The sealing, sanitary sewer connecting, or permitting of drains under this item must be documented in the written non-storm water assessment program.

- (D) The certification shall include a description of the method used, the date of any testing, and the on-site drainage points that were directly observed during the test.

d. General Requirements – The SWP3 must meet the following general requirements:

- (1) The plan shall be certified by a qualified professional. The term qualified professional means an individual who is trained and experienced in water treatment techniques and related fields as may be demonstrated by state registration, professional certification, or completion of course work that enable the individual to make sound, professional judgments regarding storm water control/treatment and monitoring, pollutant fate and transport, and drainage planning.
- (2) The plan shall be retained at the facility and be available for review by a representative of the Commissioner upon request. IDEM may provide access to portions of your SWP3 to the public.
- (3) The plan must be revised and updated as required. Revised and updated versions of the plan must be implemented on or before three hundred sixty-five (365) days from the effective date of this permit. The Commissioner may grant an extension of this time frame based on a request by the person showing reasonable cause.
- (4) If the permittee has other written plans, required under applicable federal or state law, such as operation and maintenance, spill prevention control and countermeasures (SPCC), or risk contingency plans, which fulfill certain requirements of an SWP3, these plans may be referenced, at the permittee's discretion, in the appropriate sections of the SWP3 to meet those section requirements.
- (5) The permittee may combine the requirements of the SWP3 with another written plan if:
 - (A) The plan is retained at the facility and available for review;

- (B) All the requirements of the SWP3 are contained within the plan; and
- (C) A separate, labeled section is utilized in the plan for the SWP3 requirements.

F. SCHEDULE OF COMPLIANCE, OUTFALL 001 -- Temperature

1. The permittee shall achieve compliance with the limitations specified for Temperature at the end of the cooling water discharge canal to Turtle Creek Reservoir or at the edge of a mixing zone approved in accordance with applicable federal and state laws, rules and regulations as soon as possible but no later than thirty-six (36) months from the effective date of this permit in accordance with the following schedule:
 - a. The permittee shall submit a written Plan on the ability to achieve compliance with the new Temperature limits to the Compliance Data Section of the Office of Water Quality (OWQ) nine (9) months from the effective date of this permit. IDEM will provide any comments within 30 days of receipt of the Plan and the permittee will implement the Plan immediately after receipt of IDEM's comments. The Plan shall include a description of the method(s) selected for meeting the newly imposed limitations for Temperature, in addition to any other relevant information. Relevant information should include but is not be limited to summaries of any pilot studies completed, determination of final process selection, a summary of the status of engineering design of the selected processes, project status, equipment procurement, delivery, construction, training, startup, etc. The Plan shall also include a time line specifying when each of the steps will be taken. The new limits for Temperature are deferred for the term of this compliance schedule, unless the new limits for Temperature can be met at an earlier date. The permittee shall notify the Compliance Data Section of OWQ as soon as the newly imposed limit for Temperature can be met. Upon receipt of such notification by OWQ, the final limits listed in the corresponding limitations for Temperature will become effective, but no later than thirty-six (36) months from the effective date of this permit. Monitoring and reporting of the effluent for this parameter is required during the interim period in accordance with Part I.A.1 of this permit.
 - b. The permittee shall submit a progress report to the Compliance Data Section of OWQ no later than eighteen (18) months from the effective date of this permit. This report shall include detailed information on the steps the permittee has taken to achieve compliance with the final limitations for Temperature and an

evaluation of the progress toward meeting the time line set out in the initial Plan.

- c. The permittee shall submit a subsequent progress report to the Compliance Data Section of OWQ no later than twenty-seven (27) months from the effective date of this permit. This report shall include detailed information on the steps the permittee has taken to achieve compliance with the final limitations for Temperature and an evaluation of the progress toward meeting the time line set out in the initial Plan.
 - d. Within thirty (30) days of completion of construction, the permittee shall file with the Industrial NPDES Permits Section of OWQ a notice of installation for the additional pollutant control equipment and a design summary of any modifications.
 - e. The permittee shall comply with the final limitations for Temperature no later than thirty-six (36) months from the effective date of this permit.
2. If the permittee fails to comply with any deadline contained in the foregoing schedule, the permittee shall, within fourteen (14) days following the missed deadline, submit a written notice of noncompliance to the Compliance Data Section of the OWQ stating the cause of noncompliance, any remedial action taken or planned, and the probability of meeting the date fixed for compliance with final effluent limitations.

G. REOPENING CLAUSES

This permit may be modified, or alternately, revoked and reissued, after public notice and opportunity for hearing:

1. to comply with any applicable effluent limitation or standard issued or approved under 301(b)(2)(C),(D) and (E), 304 (b)(2), and 307(a)(2) of the Clean Water Act, if the effluent limitation or standard so issued or approved:
 - a. contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - b. controls any pollutant not limited in the permit.
2. to incorporate any of the reopening clause provisions cited at 327 IAC 5-2-16.

3. to comply with any applicable standards, regulations, requirements issued or approved under section 316(b) of the Clean Water Act, if the standards regulations and requirements so issued or approved contains different conditions than those in the permit.

PART II

STANDARD CONDITIONS FOR NPDES PERMITS

A. GENERAL CONDITIONS

1. Duty to Comply

The permittee shall comply with all terms and conditions of this permit in accordance with 327 IAC 5-2-8(1) and all other requirements of 327 IAC 5-2-8. Any permit noncompliance constitutes a violation of the Clean Water Act and IC 13 and is grounds for enforcement action or permit termination, revocation and reissuance, modification, or denial of a permit renewal application.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

2. Duty to Mitigate

In accordance with 327 IAC 5-2-8(3), the permittee shall take all reasonable steps to minimize or correct any adverse impact to the environment resulting from noncompliance with this permit. During periods of noncompliance, the permittee shall conduct such accelerated or additional monitoring for the affected parameters, as appropriate or as requested by IDEM, to determine the nature and impact of the noncompliance.

3. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must obtain and submit an application for renewal of this permit in accordance with 327 IAC 5-2-8(2). It is the permittee's responsibility to obtain and submit the application. In accordance with 327 IAC 5-2-3(c), the owner of the facility or operation from which a discharge of pollutants occurs is responsible for applying for and obtaining the NPDES permit, except where the facility or operation is operated by a person other than an employee of the owner in which case it is the operator's responsibility to apply for and obtain the permit. Pursuant to 327 IAC 5-3-2(a)(2), the application must be submitted at least 180 days before the expiration date of this permit. This deadline may be extended if:

- a. permission is requested in writing before such deadline;
- b. IDEM grants permission to submit the application after the deadline; and

- c. the application is received no later than the permit expiration date.

4. Permit Transfers

In accordance with 327 IAC 5-2-8(4)(D), this permit is nontransferable to any person except in accordance with 327 IAC 5-2-6(c). This permit may be transferred to another person by the permittee, without modification or revocation and reissuance being required under 327 IAC 5-2-16(c)(1) or 16(e)(4), if the following occurs:

- a. the current permittee notified the Commissioner at least thirty (30) days in advance of the proposed transfer date.
- b. a written agreement containing a specific date of transfer of permit responsibility and coverage between the current permittee and the transferee (including acknowledgment that the existing permittee is liable for violations up to that date, and the transferee is liable for violations from that date on) is submitted to the Commissioner.
- c. the transferee certifies in writing to the Commissioner their intent to operate the facility without making such material and substantial alterations or additions to the facility as would significantly change the nature or quantities of pollutants discharged and thus constitute cause for permit modification under 327 IAC 5-2-16(d). However, the Commissioner may allow a temporary transfer of the permit without permit modification for good cause, e.g., to enable the transferee to purge and empty the facility's treatment system prior to making alterations, despite the transferee's intent to make such material and substantial alterations or additions to the facility.
- d. the Commissioner, within thirty (30) days, does not notify the current permittee and the transferee of the intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

The Commissioner may require modification or revocation and reissuance of the permit to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act or state law.

5. Permit Actions

In accordance with 327 IAC 5-2-16(b) and 327 IAC 5-2-8(4), this permit may be modified, revoked and reissued, or terminated for cause, including, but not limited to, the following:

- a. Violation of any terms or conditions of this permit;

- b. Failure of the permittee to disclose fully all relevant facts or misrepresentation of any relevant facts in the application, or during the permit issuance process; or
- c. A change in any condition that requires either a temporary or a permanent reduction or elimination of any discharge controlled by the permit, e.g., plant closure, termination of discharge by connection to a POTW, a change in state law that requires the reduction or elimination of the discharge, or information indicating that the permitted discharge poses a substantial threat to human health or welfare.

Filing of either of the following items does not stay or suspend any permit condition: (1) a request by the permittee for a permit modification, revocation and reissuance, or termination, or (2) submittal of information specified in Part II.A.3 of the permit including planned changes or anticipated noncompliance.

The permittee shall submit any information that the permittee knows or has reason to believe would constitute cause for modification or revocation and reissuance of the permit at the earliest time such information becomes available, such as plans for physical alterations or additions to the permitted facility that:

- 1. could significantly change the nature of, or increase the quantity of pollutants discharged; or
- 2. the commissioner may request to evaluate whether such cause exists.

In accordance with 327 IAC 5-1-3(a)(5), the permittee must also provide any information reasonably requested by the Commissioner.

6. Property Rights

Pursuant to 327 IAC 5-2-8(6) and 327 IAC 5-2-5(b), the issuance of this permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to persons or private property or invasion of other private rights, any infringement of federal, state, or local laws or regulations. The issuance of the permit also does not preempt any duty to obtain any other state, or local assent required by law for the discharge or for the construction or operation of the facility from which a discharge is made.

7. Severability

In accordance with 327 IAC 1-1-3, the provisions of this permit are severable and, if any provision of this permit or the application of any provision of this permit to any person or circumstance is held invalid, the invalidity shall not affect any other provisions or applications of the permit which can be given effect without the invalid provision or application.

8. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under Section 311 of the Clean Water Act.

9. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act or state law.

10. Penalties for Violation of Permit Conditions

Pursuant to IC 13-30-4, a person who violates any provision of this permit, the water pollution control laws; environmental management laws; or a rule or standard adopted by the Water Pollution Control Board is liable for a civil penalty not to exceed twenty-five thousand dollars (\$25,000) per day of any violation.

Pursuant to IC 13-30-5, a person who obstructs, delays, resists, prevents, or interferes with (1) the department; or (2) the department's personnel or designated agent in the performance of an inspection or investigation performed under IC 13-14-2-2 commits a class C infraction.

Pursuant to IC 13-30-10-1.5(k), a person who willfully or recklessly violates any NPDES permit condition or filing requirement, any applicable standards or limitations of IC 13-18-3-2.4, IC 13-18-4-5, IC 13-18-8, IC 13-18-9, IC 13-18-10, IC 13-18-12, IC 13-18-14, IC 13-18-15, or IC 13-18-16, or who knowingly makes any false material statement, representation, or certification in any NPDES form, notice, or report commits a Class C misdemeanor.

An offense under IC 13-30-10-1.5(k) is a Class D felony if the offense results in damage to the environment that renders the environment unfit for human or vertebrate animal life. An offense under IC 13-30-10-1.5(k) is a Class C felony if the offense results in the death of another person.

11. Penalties for Tampering or Falsification

In accordance with 327 IAC 5-2-8(9), the permittee shall comply with monitoring, recording, and reporting requirements of this permit. The Clean Water Act, as well as IC 13-30-10, provides that any person who knowingly or intentionally (a) destroys, alters, conceals, or falsely certifies a record that is required to be maintained under the terms of a permit issued by the department; and may be used to determine the status of compliance, (b) renders inaccurate or

inoperative a recording device or a monitoring device required to be maintained by a permit issued by the department, or (c) falsifies testing or monitoring data required by a permit issued by the department commits a Class B misdemeanor.

12. Toxic Pollutants

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act for a toxic pollutant injurious to human health, and that standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition in accordance with 327 IAC 5-2-8(5). Effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants injurious to human health are effective and must be complied with, if applicable to the permittee, within the time provided in the implementing regulations, even absent permit modification.

13. Wastewater treatment plant and certified operators

The permittee shall have the wastewater treatment facilities under the responsible charge of an operator certified by the Commissioner in a classification corresponding to the classification of the wastewater treatment plant as required by IC 13-18-11-11 and 327 IAC 5-22. In order to operate a wastewater treatment plant the operator shall have qualifications as established in 327 IAC 5-22-7.

327 IAC 5-22-10(b) provides that a certified operator may be designated as being in responsible charge of more than one (1) wastewater treatment plant, if it can be shown that he will give adequate supervision to all units involved. Adequate supervision means that sufficient time is spent at the plant on a regular basis to assure that the certified operator is knowledgeable of the actual operations and that test reports and results are representative of the actual operations conditions. In accordance with 327 IAC 5-22-3(10), "responsible charge" means the person responsible for the overall daily operation, supervision, or management of a wastewater facility.

Pursuant to 327 IAC 5-22-10(a), the permittee shall notify IDEM when there is a change of the person serving as the certified operator in responsible charge of the wastewater treatment facility. The notification shall be made no later than thirty (30) days after a change in the operator.

14. Construction Permit

In accordance with IC 13-14-8-11.6, a discharger is not required to obtain a state permit for the modification or construction of a water pollution treatment or control facility if the discharger has an effective NPDES permit.

If the discharger modifies their existing water pollution treatment or control facility or constructs a new water pollution treatment or control facility for the treatment or control of any new influent pollutant or increased levels of any existing pollutant, then, within thirty (30) days after commencement of operation, the discharger shall file with the Department of Environment Management a notice of installation for the additional pollutant control equipment and a design summary of any modifications.

The notice and design summary shall be sent to the Office of Water Quality - Mail Code 65-42, Industrial NPDES Permits Section, 100 North Senate Avenue, Indianapolis, IN 46204-2251.

15. Inspection and Entry

In accordance with 327 IAC 5-2-8(7), the permittee shall allow the Commissioner, or an authorized representative, (including an authorized contractor acting as a representative of the Commissioner) upon the presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the permittee's premises where a point source, regulated facility, or activity is located or conducted, or where records must be kept pursuant to the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment or methods (including monitoring and control equipment), practices, or operations regulated or required pursuant to this permit; and
- d. Sample or monitor at reasonable times, any discharge of pollutants or internal wastestreams for the purposes of evaluating compliance with the permit or as otherwise authorized.

B. MANAGEMENT REQUIREMENTS

1. Proper Operation and Maintenance

The permittee shall at all times maintain in good working order and efficiently operate all facilities and systems (and related appurtenances) for the collection and treatment which are installed or used by the permittee and which are necessary for achieving compliance with the terms and conditions of this permit in accordance with 327 IAC 5-2-8(8).

Neither 327 IAC 5-2-8(8), nor this provision, shall be construed to require the operation of installed treatment facilities that are unnecessary for achieving compliance with the terms and conditions of the permit.

2. Bypass of Treatment Facilities

Pursuant to 327 IAC 5-2-8(11):

- a. Terms as defined in 327 IAC 5-2-8(11)(A):
 - (1) "Bypass" means the intentional diversion of a waste stream from any portion of a treatment facility.
 - (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- b. The permittee may allow a bypass to occur that does not cause a violation of the effluent limitations in the permit, but only if it is also for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Part II.B.2.c., e, and f of this permit.
- c. Bypasses, as defined in (a) above, are prohibited, and the Commissioner may take enforcement action against a permittee for bypass, unless the following occur:
 - (1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage, as defined above;
 - (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and
 - (3) The permittee submitted notices as required under Part II.B.2.e; or

- (4) The condition under Part II.B.2.b above is met.
- d. Bypasses that result in death or acute injury or illness to animals or humans must be reported in accordance with the "Spill Response and Reporting Requirements" in 327 IAC 2-6.1, including calling 888/233-7745 as soon as possible, but within two (2) hours of discovery.
- e. The permittee must provide the Commissioner with the following notice:
 - (1) If the permittee knows or should have known in advance of the need for a bypass (anticipated bypass), it shall submit prior written notice. If possible, such notice shall be provided at least ten (10) days before the date of the bypass for approval by the Commissioner.
 - (2) The permittee shall orally report an unanticipated bypass that exceeds any effluent limitations in the permit within 24 hours of becoming aware of the bypass noncompliance. The permittee must also provide a written report within five (5) days of the time the permittee becomes aware of the bypass event. The written report must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; if the cause of noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate and prevent recurrence of the bypass event.
- f. The Commissioner may approve an anticipated bypass, after considering its adverse effects, if the Commissioner determines that it will meet the conditions listed above in Part II.B.2.c. The Commissioner may impose any conditions determined to be necessary to minimize any adverse effects.

3. Upset Conditions

Pursuant to 327 IAC 5-2-8(12):

- a. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error,

improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

- b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Paragraph c of this section, are met.
- c. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, that:
 - (1) An upset occurred and the permittee has identified the specific cause(s) of the upset, if possible;
 - (2) The permitted facility was at the time being operated in compliance with proper operation and maintenance procedures;
 - (3) The permittee complied with any remedial measures required under Part II.A.2; and
 - (4) The permittee submitted notice of the upset as required in the "Twenty-Four Hour Reporting Requirements," Part II.C.3, or 327 IAC 2-6.1, whichever is applicable.

4. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed from or resulting from treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the State and to be in compliance with all Indiana statutes and regulations relative to liquid and/or solid waste disposal. The discharge of pollutants in treated wastewater is allowed in compliance with the applicable effluent limitations in Part I. of this permit.

C. REPORTING REQUIREMENTS

1. Planned Changes in Facility or Discharge

Pursuant to 327 IAC 5-2-8(10)(F), the permittee shall give notice to the Commissioner as soon as possible of any planned physical alterations or additions to the permitted facility. In this context, permitted facility refers

to a point source discharge, not a wastewater treatment facility. Notice is required only when either of the following applies:

- a. The alteration or addition may meet one of the criteria for determining whether the facility is a new source as defined in 327 IAC 5-1.5.
- b. The alteration or addition could significantly change the nature of, or increase the quantity of, pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in Part I.A. nor to notification requirements in Part II.C.9. of this permit.

Following such notice, the permit may be modified to revise existing pollutant limitations and/or to specify and limit any pollutants not previously limited.

2. Monitoring Reports

Pursuant to 327 IAC 5-2-8(9) and 327 IAC 5-2-13 through 15, monitoring results shall be reported at the intervals and in the form specified in "Monitoring Reports", Part I.C.2.

3. Twenty-Four Hour Reporting Requirements

Pursuant to 327 IAC 5-2-8(10)(C), the permittee shall orally report to the Commissioner information on the following types of noncompliance within 24 hours from the time permittee becomes aware of such noncompliance. If the noncompliance meets the requirements of item b (Part II.C.3.b) or 327 IAC 2-6.1, then the report shall be made within those prescribed time frames.

- a. Any unanticipated bypass which exceeds any effluent limitation in the permit;
- b. Any noncompliance which may pose a significant danger to human health or the environment. Reports under this item shall be made as soon as the permittee becomes aware of the noncomplying circumstances;
- c. Any upset (as defined in Part II.B.3 above) that causes an exceedance of any effluent limitation in the permit;

The permittee can make the oral reports by calling (317)232-8670 during regular business hours or by calling (317) 233-7745 ((888)233-7745 toll free in Indiana) during non-business hours. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce and eliminate the noncompliance and prevent its recurrence. The Commissioner may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. Alternatively the permittee may submit a "Bypass Fax Report" or a "Noncompliance Notification Report", whichever is appropriate, to IDEM at (317) 232-8637. If a complete fax submittal is sent within 24 hours of the time that the permittee became aware of the occurrence, then the fax report will satisfy both the oral and written reporting requirements.

4. Other Noncompliance

Pursuant to 327 IAC 5-2-8(10)(D), the permittee shall report any instance of noncompliance not reported under the "Twenty-Four Hour Reporting Requirements" in Part II.C.3, or any compliance schedules at the time the pertinent Discharge Monitoring Report is submitted. The report shall contain the information specified in Part II.C.3.

5. Other Information

Pursuant to 327 IAC 5-2-8(10)(E), where the permittee becomes aware of a failure to submit any relevant facts or submitted incorrect information in a permit application or in any report, the permittee shall promptly submit such facts or corrected information to the Commissioner.

6. Signatory Requirements

Pursuant to 327 IAC 5-2-22 and 327 IAC 5-2-8(14):

- a. All reports required by the permit and other information requested by the Commissioner shall be signed and certified by a person described below or by a duly authorized representative of that person:
 - (1) For a corporation: by a responsible corporate officer defined as a president, secretary, treasurer, any vice-president of the corporation in charge of a principal business function, or any other person who performs

similar policymaking or decision making functions for the corporation or the manager of one or more manufacturing, production or operating facilities employing more than two hundred fifty (250) persons or having the gross annual sales or expenditures exceeding twenty-five million dollars (\$25,000,000) (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

- (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
- (3) For a Federal, State, or local government body or any agency or political subdivision thereof: by either a principal executive officer or ranking elected official.

b. A person is a duly authorized representative only if:

- (1) The authorization is made in writing by a person described above.
- (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or a position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
- (3) The authorization is submitted to the Commissioner.

c. Certification. Any person signing a document identified under Part II.C.6. shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

7. Availability of Reports

Except for data determined to be confidential under 327 IAC 12.1, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Indiana Department of Environmental Management and the Regional Administrator. As required by the Clean Water Act, permit applications, permits, and effluent data shall not be considered confidential.

8. Penalties for Falsification of Reports

IC 13-30 and 327 IAC 5-2-8(14) provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance, shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 180 days per violation, or by both.

9. Changes in Discharge of Toxic Substances

Pursuant to 327 IAC 5-2-9, the permittee shall notify the Commissioner as soon as it knows or has reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge of any pollutant identified as toxic, pursuant to Section 307(a) of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels."
 - (1) One hundred micrograms per liter (100µg/l);
 - (2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500µg/l) for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and one milligram per liter (1mg/l) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - (4) A notification level established by the Commissioner on a case-by-case basis, either at his own initiative or upon a petition by the permittee. This notification level may exceed the level specified in subdivisions (1), (2), or (3) but

may not exceed the level which can be achieved by the technology-based treatment requirements applicable to the permittee under the CWA (see 327 IAC 5-5-2).

- b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (1) Five hundred micrograms per liter (500 µg/l);
 - (2) One milligram per liter (1 mg/l) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with Sec. 122.21(g)(7).
 - (4) A notification level established by the Commissioner on a case-by-case basis, either at his own initiative or upon a petition by the permittee. This notification level may exceed the level specified in subdivisions (1), (2), or (3) but may not exceed the level which can be achieved by the technology-based treatment requirements applicable to the permittee under the CWA (see 327 IAC 5-5-2).
- c. That it has begun or expects to begin to use or manufacture, as an intermediate or final product or byproduct, any toxic pollutant which was not reported in the permit application under 40 CFR 122.21(g)(9).

PART III
Other Requirements

A. 316(b) – Cooling Water Intake Structure

Hoosier Energy, Merom Generating Station submitted an Impingement Study on March 3, 2009 and based upon the study information IDEM has determined that the existing cooling water intake structures which contain traveling screens represent best technology available to minimize adverse environmental impact in accordance with Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326). This determination will be reassessed at the next permit reissuance to ensure that the CWISs continue to meet the requirements of Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326).

B. Intake Screen Wash

There shall be no discharge of debris from intake screen washing operations which will settle to form objectionable deposits, which is in amounts sufficient to be unsightly or deleterious, or which will produce colors or odors constituting a nuisance.

C. Polychlorinated Biphenyl

There shall be no discharge of polychlorinated biphenyl (PCBs) compounds such as those commonly used for transformer fluid.

Briefing Memo August 2010

**Hoosier Energy REC, Inc.
Merom Generating Station
Old County Road 550
5500 Old SR 54 West
Sullivan, IN 47882
Sullivan County
NPDES Permit No. IN0050296**

Introduction

Hoosier Energy has applied for the renewal of the NPDES permit IN0050296 for the Merom Generating Station (MGS). The permit was last issued on October 1, 1997. The permittee submitted a timely renewal application and the permit has been administratively extended in accordance with 327 IAC 5-2-6. The permit regulates the discharge of condenser cooling water, low volume waste, sanitary waste and storm water runoff. A five year permit is proposed in accordance with 327 IAC 5-2-6(a).

Facility Description

The Merom Generating Station consists of two (2) coal fired steam electric generating units with the total output capacity of 1,094 megawatt (MW). The facility has one wastewater discharge into Turtle Creek Reservoir. Turtle Creek Reservoir has an overflow discharge to Turtle Creek. There are four (4) internal outfalls which discharge into the noncontact cooling water discharge canal, Outfall 001. The cooling water discharges canal is over a mile in length and discharges into the northern end of the Reservoir. Five (5) stormwater outfalls have been identified that discharge to the Reservoir.

Turtle Creek Reservoir is a 1,600 acre lake that was created by Hoosier Energy to be used as a source of make-up water and also used to cool the discharge of heated condenser waster water from the generating facility.

The facility is identified as Stream Electric Power Generating Facility with a Standard Industrial Code (SIC) of 4911 – Electrical Services.

Receiving Water and Use Classification

The facility has one process wastewater discharge to the Turtle Creek Reservoir through Outfall 001. Turtle Creek Reservoir covers 1,600 acres and is used primarily to cool the condensers from the steam electric generating station. The Merom Generating Station owns the land surrounding the Reservoir.

The permittee has an intake structure that is located on the Wabash River. It can pump a maximum of 43 mgd to the Turtle Creek Reservoir to provide for water losses. The generating

facility has an intake structure and pumping facility on Turtle Creek Reservoir to provide cooling water for the generating facility. This water is returned to the Reservoir by way of the cooling water discharge canal, Outfall 001.

Compliance History

There are no permit related enforcement actions against the facility.

Wastewater Sources and Treatment

Outfall 001 Discharge Canal

Outfall 001 consists primarily of once through noncontact cooling water. The discharge enters the Northern end of Turtle Creek Reservoir through a discharge canal which is approximately 1.25 miles long. The Reservoir is used to cool the condenser cooling water from the generating station. The discharge of condenser cooling water was approved in the original permit issued to this facility in lieu of using cooling towers. A 316(a) demonstration study performed for Hoosier Energy REC, Inc. predicted that cooling towers were not needed to maintain a well balanced aquatic community within the Reservoir. The maximum discharge flow from Outfall 001 is 484 million gallons per day (MGD). The discharge consists predominantly of Condenser Cooling Water. Internal Outfalls 101, 201, 301, and 401 also discharge to the reservoir by way of Outfall 001 discharge canal.

Outfall 002 Discharge from Turtle Creek Reservoir

Outfall 002 consists of the discharge of water from Turtle Creek Reservoir through the continuous flow outlet pipe. This discharge is being re-introduced into the permit during the interim period while Hoosier Energy is working toward compliance with the final temperature limits that will be applied at outfall 001.

Internal Outfall 101 Low Volume Wastewater

Internal Outfall 101 consists of wastewaters from plant sumps, coal and limestone runoff, boiler blowdown and condensate, service water, bottom ash handling water, demineralizer regenerant wastewater and metal cleaning wastes. The various wastewaters enter five (5) settling basins. The wastewater flows from the basins to the wastewater treatment system. The treatment consists of lime reaction, oxidation filtration and neutralization. After neutralization, the effluent flows to the final effluent basin and discharges to the cooling water discharge canal. The wastewater treatment system has an average discharge of approximately 0.94 MGD.

Internal Outfall 201 Sanitary Wastewater

Internal Outfall 201 consists of sanitary wastewater. The sanitary wastewater is treated by an activated sludge treatment plant with effluent chlorination. After treatment, the wastewater is discharged into the cooling water discharge canal. Sludge from the package plant is disposed of off-site. The wastewater treatment system has an average discharge of approximately 0.005

MGD.

Internal Outfall 301 Flue Gas Desulfurization (FGD) Sludge Storage Area and Landfill Runoff and FGD Process Overflow and Groundwater from the FGD Solids Stabilization Area

Internal Outfall 301 consists of surface water and any groundwater from the FGD Stabilization Building and immediate area, vacuum pump compression water (non-contact potable water used to create a vacuum for dewatering FGD solids and surface water from the Area 1 landfill (closed and inactive). The wastewater is treated by a settling basin that discharges to the cooling water discharge canal. The flow of Internal Outfall 301 is 0.093 Monthly Average and 0.288 mgd Daily Maximum based upon the Discharge Monitoring Report data from July 2008 to June 2010.

Internal Outfall 401 FGD Sludge Landfill Runoff and Groundwater from Area 1 Landfill

Internal Outfall 401 consists of surface and groundwater from Area 1 landfill (closed and inactive). The wastewater is treated by a settling basin that discharges to the discharge canal. The flow of Internal Outfall 401 is 0.002 mgd Monthly Average and 0.005 mgd Daily Maximum based upon the Discharge Monitoring Report data from July 2008 to June 2010.

A Water Balance Diagram is appended as Attachment I

Stormwater Outfalls

<u>Outfall Number</u>	<u>Area</u>	<u>Drainage Area Description</u>
Outfall 001S	47 acres	The North Drainage Ditch; FGD (scrubber) area. a warehouse building, coal sampler and coal car dumper.
Outfall 002S	22 acres	The North side of both units, the precipitator, the bottom ash handling area, a parking lot and a portion of the East side of unit 2.
Outfall 003S	79 acres	Area 2 of the landfill (active), a warehouse building, substation, cooling water intake building area, a portion of the East side of unit 2, the Engineering Building (offices) and blowdown from the elevated water storage tank (potable well water)
Outfall 004S	40 acres	The North and East side of the Area 1 Landfill (closed and inactive).
Outfall 005S	16 acres	Buildings and area at wastewater treatment.

A Facility Site Map is appended as Attachment II & III

Effluent Limitations Rationale -- General

Federal Effluent Guidelines in 40 CFR 423 and the Indiana Water Quality Based Effluent Limitations are applicable because the facility is defined as a steam electric generating facility and is identified to have a SIC Code of 4911.

Effluent Limitations Rationale

According to 40 CFR 122.44 and 327 IAC 5, NPDES permit limits are based on technology-based limitations, where applicable, best professional judgment (BPJ), and Indiana Water Quality-Based Effluent Limitations (WQBELs).

EPA Effluent Guidelines -- Existing Source Standards (BAT/BPT)

The U.S. EPA has established technology-based effluent guidelines for steam electric generating facilities. Since this is an existing facility, all discharges may be subject to effluent guidelines identified in 40 CFR 423.12, Best Practicable Control Technology (BPT) and/or 40 CFR 423.13, Best Available Control Technology (BAT). The applicable effluent guidelines are as follows:

1. pH Control – 40 CFR 423.12(b)(1), The pH of all discharges, except once through cooling water, shall be within the range of 6.0--9.0. (BPT)
2. Polychlorinated biphenyl (PCB) – 40 CFR 423.12(b)(2), There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid. (BPT)
3. Low Volume Waste – 40 CFR 423.12(b)(3), low volume waste may include wastewater from ion exchange treatment systems, laboratory and sampling streams, boiler blowdown, floor drains, service water systems. Effluent limitations for low volume waste are for Total Suspended Solids are 100.0 mg/l daily maximum and 30.0 mg/l monthly average and Oil and Grease are 20.0 mg/l daily maximum and 15.0 mg/l monthly average. (BPT)
4. Fly Ash & Bottom Ash Transport Water – 40 CFR 423.12(b)(4), the quantity of pollutants discharged in fly ash and bottom ash transport water shall not exceed the following concentrations listed below for Total Suspended Solids (TSS) and Oil & Grease; Total Suspended Solids -- 100.0 mg/l daily maximum and 30.0 mg/l monthly average; and Oil & Grease – 20.0 mg/daily maximum and 15.0 mg/l monthly average. (BPT)
5. Metal Cleaning Waste – 40 CFR 423.12(b)(5), means any wastewater resulting from cleaning [with or without chemical cleaning compounds] any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheat cleaning. Effluent limitations are; TSS -- 100.0 mg/l daily maximum and 30.0 mg/l monthly average; Oil & Grease -- 20.0 mg/l daily maximum and 15.0 mg/l monthly average; Copper – 1.0 mg/l daily maximum and monthly average; Iron – 1.0 mg/l daily maximum and monthly average. (BPT)
6. Chlorine Limitations – 40 CFR 423.13(b)(1), For any plant with a total rated electric generating capacity of 25 or more megawatts, the quantity of pollutants discharged in once through cooling water from each discharge point shall not exceed the maximum concentration of 0.2 mg/l maximum concentration of Total Residual Chlorine. (BAT)

7. Chlorine Limitations – 40 CFR 423.13(b)(2), Total residual chlorine may not be discharged from any single generating unit for more than two hours per day unless the discharger demonstrates to the permitting authority that discharge for more than two hours is required for macroinvertebrate control. Simultaneous multi-unit chlorination is permitted. (BAT)
8. Chlorine Limitations – 40 CFR 423.12(b)(8), Except as provided in 40 CFR 423.13(b)(2) and item 7 above, neither free available chlorine nor total residual chlorine (TRC) may be discharged from any unit for more than two hours in any one day and not more than one unit in the plant may discharge free available chlorine or TRC at any one time unless the utility can demonstrate that the units in a particular location cannot operate at or below this level of chlorination. (BPT)
9. Coal Pile Runoff – 40 CFR 423.12(b)(9), Subject to the provisions of paragraph(b)(10) below, the effluent limitations of 50.0 mg/l Total Suspended Solids (TSS) shall apply to coal pile runoff. (BPT)
10. Coal Pile Runoff Exception -- 40 CFR 423.12(b)(10), Any untreated overflow from facilities designed, constructed, and operated to treat the volume of coal pile runoff which is associated with a 10 year, 24 hour rainfall event shall not be subject to the limitations in paragraph (E)(9) above. (BPT)

Indiana Water Quality Based Effluent Limits (WQBELs)

The water quality-based effluent limitations for this facility are based on water quality criteria in 327 IAC 2-1-6 or under the procedures described in 327 IAC 2-1-8.2 through 327 IAC 2-1-8.6 and implementation procedures in 327 IAC 5. Limitations and/or monitoring are required for parameters identified by applications of the reasonable potential to exceed WQBEL under 327 IAC 5-2-11.1(h)(1).

Narrative Water Quality Based Limits

The narrative water quality contained under 327 IAC 2-1-6(a)(1) (A)-(E) have been included in this permit to ensure that the narrative water quality criteria are met.

Numeric Water Quality Based Limits

The numeric water quality criteria and values contained in this permit have been calculated using the tables of water quality criteria 327 IAC 2-1-6(b) & (c).

Effluent Limitation Rational – Outfall Specific Criteria

Outfall 001 Discharge Canal

Flow

Flow monitoring is required in all NPDES permits. The monitoring requirement is in accordance with 327 IAC 5-2-13(a)(2).

Temperature Requirements

- (a.) The discharge from Outfall 001 shall not exceed the maximum limits in the following table more than one percent (1%) of the hours in the twelve (12) month period ending with any month. At no time shall the water temperature at such locations exceed the maximum limits in the following table by more than three degrees Fahrenheit (3°F).

Table 1

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
°F	50	50	60	70	80	90	90	90	90	78	70	57
°C	10	10	15.6	21.1	26.7	32.2	32.2	32.2	32.2	25.5	21.1	14

- (b.) Temperature measurements shall be taken at the end of the cooling water discharge canal to Turtle Creek Reservoir or at the edge of a mixing zone approved in accordance with applicable federal and state laws, rules and regulations and shall be identified as Outfall 001 for the purpose of temperature compliance monitoring.
- (c.) Temperature measurements at the above approved location shall be recorded in one hour intervals. The highest single recorded measurement for each day shall be reported on the state monthly monitoring report for each day. The highest single recorded daily measurement shall be reported on the federal discharge monitoring report as the maximum daily temperature of that month.
- (d.) The number of hours where the measured temperature at Outfall 001 exceeds the limits in Table 1 and the number of days where the measured temperature exceeds the limits in Table 1 by more than 3°F shall be reported on the state monthly monitoring report and the federal discharge monitoring report.
- (e.) The cumulative number of hours where the temperature measurements at Outfall 001 exceed the limits in Table 1 during the most recent twelve (12) month period beginning on the effective date of the permit shall be reported on the state monthly monitoring report and the federal discharge monitoring report every month. The most recent twelve (12) months shall include the current month and the previous eleven (11) months.

Assessment of Compliance – Temperature

Hoosier Energy cannot currently comply with the new temperature limits. They have been subject to alternate thermal limits authorized by 327 IAC 5-7. 327 IAC 5-7 is the state rule to implement section 316(a) of the Clean water Act. Since the alternate thermal effluent limits based on the predictive 316(a) demonstration are no longer considered appropriate by IDEM and IDNR, Hoosier Energy will have to achieve compliance with the temperature limitations based on Indiana Water Quality Standards outlined in the permit.

Hoosier Energy has provided information on preliminary ideas that can be implemented to reduce the thermal impact of their discharge. They include the following:

- I. Hoosier Energy has contracted with Purdue University to determine state of the art heat transfer technology that would allow Hoosier to maximize the removal of Btu's from thermally enriched water to provide both heating and potentially cooling facilities to the developments listed below. An additional application would be to use waste steam from the boiler process directly in a heat exchanger. This process would reduce the amount of water to be cooled in the once through cooling process. Utilization of the cooling water is described below:
 - A. Hoosier Energy has been working with an international greenhouse operator with plans to start with a 50 acre greenhouse to be built adjacent to the Merom Generating Station. It has been estimated that these facilities would use up to 20% of the cooling water going to the reservoir. Phase II would add an additional 50 acre greenhouse.
 - B. Hoosier Energy has been working with state agricultural interests to develop an aquaculture facility which will use the heat from the cooling water to heat the building and potentially may provide some water for direct usage in the facility.
- II. With the development of the greenhouse(s), the need for a processing center would be great. This idea would be to attract a development that could then use the steam cycle heated water or lake water in a geothermal process, utilizing a heat exchanger to provide refrigeration.
- III. Hoosier Energy has contracted engineering firms to determine additional passive (non-energy intensive) measures that could be implemented. They include:
 - A. Floating Spray Cooling
 - B. Channelization
 - C. Lake Bed Aeration
 - D. Hydroelectric Generation

- E. Structural Additions to the discharge canal, and
- F. Others, as studies continue.

The proposed three (3) year schedule of compliance is set up as follows:

0-9 Months: Hoosier Energy must submit a plan within nine (9) months of the effective date of the permit to achieve compliance with the new temperature limitations.

IDEM will review this plan and provide comments within 30 days.

The plan shall provide the relevant information and should include but is not limited to the following:

Summaries of any pilot studies completed; Determination of final process selection; A summary of the status of engineering design of the selected processes; Project status; Equipment procurement, Delivery; Construction; Training, Startup, etc.

At 18 Months: Report to be submitted that includes detailed information on the steps the permittee has taken to achieve compliance with the final temperature limitations.

At 27 Months: An updated progress report submitted that includes detailed information on the steps the permittee has taken to achieve compliance with the final temperature limitations.

By 36 Months: The permittee shall comply with the final limitations for temperature.

Compliance Schedule For The New Thermal Limitations

The permittee has requested a 3 year compliance schedule to meet the thermal permit limitations identified above and also identified in Permit Part I. A.1. The 3 year schedule of compliance as outlined in Permit Part I.F. in which to meet the final effluent limitations for temperature. Interim thermal limitations have been established for the discharge from the Turtle Creek Reservoir to Turtle Creek, Outfall 002, Part I.A.2 of the permit. Outfall 002 was previously established in the permit issued on October 1, 1986 permit and is now being reestablished as the point of compliance for temperature limits during the interim period.

A further discussion of the changes to the thermal discharge criteria is located at the end of the Fact Sheet "Change to the Thermal Effluent Limits"

Outfall 002 – Discharge from Turtle Creek Reservoir

During the term of the compliance schedule to meet the temperature limits at outfall 001,

temperature will be monitored on a daily basis and limited at Outfall 002 to ensure that the discharge from Turtle Creek Reservoir does not cause any harm to the aquatic life in Turtle Creek at the point where the continuous flow outlet pipe from the Reservoir discharges into Turtle Creek. The temperature limits established by 327 IAC 2-1-6(c), Indiana surface water quality criteria are as follows:

The discharge from Outfall 002 shall not exceed the maximum limits in the following table more than one percent (1%) of the hours in the twelve (12) month period ending with any month. At no time shall the water temperature at such locations exceed the maximum limits in the following table by more than three degrees Fahrenheit (3°F).

Table 1

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
°F	50	50	60	70	80	90	90	90	90	78	70	57
°C	10	10	15.6	21.1	26.7	32.2	32.2	32.2	32.2	25.5	21.1	14

Internal Outfall 101 -- Low Volume Wastewater

Flow

Flow monitoring is required in all NPDES permits. The monitoring requirement is in accordance with 327 IAC 5-2-13(a)(2).

pH

Limitations for pH are based upon 327 IAC 2-1-6(b)(2) and 40 CFR 423.

Total Suspended Solids (TSS)

The Total Suspended Solids effluent limits for are from the 40 CFR 123.12. The effluent limitations are 30 mg/l Monthly Average and 100 mg/l Daily Maximum and are unchanged from the previous permit.

Oil and Grease

Oil and Grease is included in the permit in accordance with 40 CFR 423.12. The effluent limitations of 10 mg/l (Monthly Average) and 15 mg/l (Daily Maximum) are unchanged from the previous permit.

Total Copper and Total Iron

The copper and iron limitations are based upon the presence of periodic metal cleaning waste that may be discharged to the settling ponds. Iron limits of 1.0 mg/l daily maximum and monthly average as well as copper limitations of 1.0 mg/l daily maximum and monthly average are both based upon 40 CFR 123.12 (b)(5). These limitations are carried forward from the previous permit and are effective when metal cleaning wastes are discharged to the settling pond.

Outfall 101 (0.22 mgd) mixes with 484 mgd of cooling water in the discharge canal prior to discharge into Turtle Creek Reservoir. Based upon the dilution afforded by the cooling water, there is no reasonable potential for copper or iron to exceed water quality standards at Outfall 001.

Internal Outfall 201 -- Sanitary Wastewater

Flow

Flow monitoring is required in all NPDES permits. The monitoring requirement is in accordance with 327 IAC 5-2-13(a)(2).

pH

Limitations for pH are based upon 327 IAC 2-1-6(b)(2) and 40 CFR 423.

Total Suspended Solids CBOD, & Ammonia-N

These effluent limits are based upon 327 IAC 5-10-4 for Lake Dischargers. They apply to all POTWs or other sanitary dischargers that discharge directly to lakes or reservoirs (either natural or manmade impoundments). These limitations were in the previous permit.

Pollutant	Monthly Average Concentration (mg/l)	Weekly Average Concentration (mg/l)
CBOD5	10	15
Total Suspended Solids	12	18
Total Ammonia, as N		
Summer	1.1	1.6
Winter	1.6	2.4

Disinfection

In accordance with 327 IAC 5-10-6(a), disinfection is required of all sanitary discharges for the annual period of April 1 through October 31. The chlorine residual at the end of the chlorine tank must be no less than 0.5 mg/l and no greater than 1.0 mg/l to insure disinfection.

327 IAC 5-10-6(c)(3) states that, for all sanitary dischargers using chlorine as a disinfectant, dechlorination is to be practiced such that the concentration of total residual chlorine (TRC) in the final effluent does not exceed water quality-based effluent limitations.

The facility does not use chemicals to dechlorinate the wastewater. Internal Outfall 201 discharges to the condenser cooling water discharge canal that consists of a 484 mgd daily flow and will provide significant dilution prior to discharge to the reservoir at Outfall 001.

Internal Outfall 301 -- Flue Gas Desulfurization (FGD) Sludge Storage Area and Landfill Runoff and FGD Process Overflow and;

Internal Outfall 401 -- FGD Sludge Landfill Runoff

Flow

Flow monitoring is required in all NPDES permits. The monitoring requirement is in accordance with 327 IAC 5-2-13(a)(2).

pH

Limitations for pH are based upon 327 IAC 2-1-6(b)(2) and 40 CFR 423.

TSS and Sulfate

These parameters will be monitored as in the previous permit. Sulfates have been identified with ranges from 500 mg/l at Internal Outfall 301 to 2,500 mg/l at Internal Outfall 401. The Daily Maximum effluent limitation for TSS is 50 mg/l at the Internal Outfall.

The Internal Outfall 401 discharges to the cooling water discharge canal that contains a maximum daily flow of 484 mgd and will therefore meet WQBELS for sulfate at the Outfall 001 discharge to the reservoir because of such a high dilution ratio. The maximum flow for Internal Outfall 301 is 0.288 mgd and the maximum flow for Internal Outfall 401 is 0.0055 mgd.

Metals Monitoring of Coal Combustion and FGD Wastewater

EPA documents such as the 1999 Report to Congress, Wastes from the Coal Combustion of Fossil Fuels and supporting documents identify that metals may be present in coal combustion waste materials. The waste materials include fly ash, bottom ash, boiler slag, flue gas desulfurization (FGD) and related wastewaters. Therefore, metals monitoring for arsenic, cadmium, chromium, copper, lead, nickel, selenium, zinc, sulfate and chloride are included in the monitoring for these outfalls. Monthly monitoring for metals is required at Internal Outfalls 301 & 401.

Water Treatment Additives

In the event that changes are to be made in the use of water treatment additives including dosage rates and concentrations contributing to Outfall 001, the permittee shall notify the Indiana Department of Environmental Management as required by Part II.C.1 of this permit. The use of any new or changed water treatment additives must receive prior approval from IDEM in accordance with this permit. The permittee must provide the acute and chronic aquatic toxicity information on any new or changed water treatment additives. The following water treatment additives have been approved for use: BetzDearborn products - Cortrol OS5607, Depositrol BL5301, Flogard POT6100, Polyfloc AE1115, Polyfloc AE1123, Dianodic DN2478, Spectrus CT1300.

Intake Structure Requirements

Section 316(b) of the federal Clean Water Act requires that facilities minimize adverse environmental impact resulting from the operation of cooling water intake structures (CWIS) by using the "best technology available" (BTA). U.S. EPA has promulgated rules to implement these requirements for new facilities (Phase I rules), large, existing power plants (Phase II rules) which are currently remanded, and offshore oil and gas extraction facilities (Phase III rules), and that implementation must take place through the issuance of NPDES permits. However, there is a large universe of facilities which are not specifically addressed by the rules, including:

- New facilities with a CWIS design flow less than 2 MGD;
- Existing power plants with a CWIS design flow less than 50 MGD;
- Manufacturing facilities such as existing steel mills, paper mills, etc. with a surface water intake that use at least a portion of their intake flow for cooling purposes.

U.S. EPA has recently emphasized that all of these facilities, including those not specifically addressed by rules must be evaluated for 316(b) compliance. 40 C.F.R. §125.90(b) directs permitting authorities to establish 316(b) requirements on a best professional judgment (BPJ) basis for existing facilities not subject to categorical section 316(b) regulations (Phase I, II or III rules). IDEM is required to make a BTA determination using BPJ so the permit will comply with the federal regulation.

Circulating water for the Merom Generating Station (MSG) is withdrawn through a single screenhouse located at the end of a 2,390 ft long constructed intake canal. The intake canal has a concrete-lined bottom at El. 455.0, with a bottom width of 46 ft over the length of the canal. The canal expands to about 100 ft wide and slopes to invert el. 448.0 ft upstream of the screenhouse.

The screenhouse has four bays, two per unit. Each bay is 13.3 ft wide and is equipped with a trash rack and vertical traveling water screen. The trash racks have 3/8-in. wide steel bars with about 4 in. clear spacing. The vertical traveling screens are located approximately 16 ft downstream of the trash racks. The screens are made of 3/8-in. square mesh material and are 12 ft wide and about 40 ft high. A "lip" is installed on the bottom of each screen panel to hold fish as the screens rotate. The screens can rotate continuously and are cleaned by low (2 psi at 85 gpm) and high pressure (50 gpm at 220 gpm) spray wash system. The low pressure spray wash system removes fish from the front face of the screens and the high pressure system removes debris from the backside of the screens.

Each unit has two vertical circulating water pumps, located downstream of the vertical traveling screens. Each pump provides a total of 84,400 gpm (~122 MGD) and a total rated circulating water pump capacity is about 339,200 (~488 MGD).

The calculated flow velocity at design flow capacity (759 cfs/488 mgd) under low (El 463.0 ft) and high (El. 470.0 ft) lake levels within the influence of the Cooling Water Intake Screen is

1.1 ft/s at Low Pool and 0.7 ft/s at High Pool.

The traveling screens have been determined to be representative of the Best Technology Available (BTA) based on the best professional judgment of IDEM. The BTA may change when a final definition has been developed for BTA in the federal regulations for Phase II type facilities.

Stormwater

According to 40 CFR 122.26(b)(14)(ii) and 327 IAC 5-4-6(b)(1) facilities classified as a "Steam Electric Power Generating Facility" are considered to be engaging in "industrial activity" for purposes of 40 CFR 122.26(b). Therefore the permittee is required to have all storm water discharges associated with industrial activity permitted. Treatment for storm water discharges associated with industrial activities is required to meet, at a minimum, best available technology economically achievable/best conventional pollutant control technology (BAT/BCT) requirements. EPA has determined that non-numeric technology-based effluent limits have been determined to be equal to BPT/BAT/BCT for storm water associated with industrial activity.

Storm water associated with industrial activity must be assessed to determine compliance with all water quality standards. The non-numeric storm water conditions and effluent limits contain the technology-based effluent limitations. Effluent limitations, as defined in the CWA, are restrictions on quantities, rates, and concentrations of constituents which are discharged. Effective implementation of these requirements should meet the applicable water quality based effluent limitations. Violation of any of these effluent limitations constitutes a violation of the permit.

The technology-based effluent limitations require the permittee to minimize exposure of raw, final, or waste materials to rain, snow, snowmelt, and runoff. In doing so, the permittee is required, to the extent technologically available and economically practicable and achievable, to either locate industrial materials and activities inside or to protect them with storm resistant coverings. In addition, the permittee is required to: (1) use good housekeeping practices to keep exposed areas clean, (2) regularly inspect, test, maintain and repair all industrial equipment and systems to avoid situations that may result in leaks, spills, and other releases of pollutants in stormwater discharges, (3) minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur, (4) stabilize exposed area and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants, (5) divert, infiltrate, reuse, contain or otherwise reduce stormwater runoff, to minimize pollutants in your discharges, (6) enclose or cover storage piles of salt or piles containing salt used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces, (7) train all employees who work in areas where industrial materials or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of your Pollution

Prevention Team, (8) ensure that waste, garbage and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged, and (9) minimize generation of dust and off-site tracking of raw, final or waste materials.

To meet the non-numeric effluent limitations in Part I.D.4, the permit requires the permitted facility to select control measures (including best management practices) to address the selection and design considerations in Part I.D.3.

The permittee must control its discharge as necessary to meet applicable water quality standards. It is expected that compliance with the non-numeric effluent limitations and other terms and conditions in this permit will meet this effluent limitation. However, if at any time the permittee, or IDEM, determines that the discharge causes or contributes to an exceedance of applicable water quality standards, the permittee must take corrective actions, and conduct follow-up monitoring.

“Term and Condition” to Provide Information in a SWPPP

Distinct from the effluent limitation provisions in the permit, the permit requires the discharger to prepare a Stormwater Pollution Prevention Plan (SWPPP) for its facility. The SWPPP is intended to document the selection, design, installation, and implementation (including inspection, maintenance, monitoring, and corrective action) of control measures being used to comply with the effluent limits set forth in Part I.D. of the permit. In general, the SWPPP must be kept up-to-date, and modified whenever necessary to reflect any changes in control measures that were found to be necessary to meet the effluent limitations in this permit.

The requirement to prepare a SWPPP is not an effluent limitation, rather it documents what practices the discharger is implementing to meet the effluent limitations in Part I.D. of the permit. The SWPPP is not an effluent limitation because it does not restrict quantities, rates, and concentrations of constituents which are discharged. Instead, the requirement to develop a SWPPP is a permit “term or condition” authorized under sections 402(a)(2) and 308 of the Act. Section 402(a)(2) states, “[t]he Administrator shall prescribe conditions for [NPDES] permits to assure compliance with the requirements of paragraph (1) of this subsection, including conditions on data and information collection, reporting, and such other requirements as he deems appropriate.” The SWPPP requirements set forth in this permit are terms or conditions under the CWA because the discharger is documenting information on how it intends to comply with the effluent limitations (and inspection and evaluation requirements) contained elsewhere in the permit. Thus, the requirement to develop a SWPPP and keep it updated is no different than other information collection conditions, as authorized by section 402(a)(2), in other permits.

IDEM's Non-Numeric Effluent Limitations and SWPPP language was modeled from and is consistent with the EPA's Multi-Sector General Permit for Storm Water Discharges Associated

with Industrial Activity, issued on September 29, 2008. It should be noted that EPA has developed a guidance document, "Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices", 1992 to assist facilities in developing a SWPPP. The guidance contains worksheets, checklists, and model forms that should assist a facility in developing a SWPPP.

EPA documents such as the "Report to Congress, Waste from the Combustion of Fossil Fuels, Volume 1 & 2" March 1999, and related documents" identify that metals and sulfate may be present in coal combustion waster materials and therefore annual monitoring of stormwater for flow, total suspended solids, oil & grease, arsenic, cadmium, chromium, copper, lead, nickel, selenium, zinc, sulfate, chloride and pH has been included in the permit.

Spill Response and Reporting Requirement

Reporting requirements associated with the Spill Reporting, Containment, and Response requirements of 327 IAC 2-6.1 are included in Part II.B.2.c. and Part II.C.3. of the NPDES permit. Spills from the permitted facility meeting the definition of a spill under 327 IAC 2-6.1-4(15), the applicability requirements of 327 IAC 2-6.1-1, and the Reportable Spills requirements of 327 IAC 2-6.1-5 (other than those meeting an exclusion under 327 IAC 2-6.1-3 or the criteria outlined below) are subject to the Reporting Responsibilities of 327 IAC 2-6.1-7.

It should be noted that the reporting requirements of 327 IAC 2-6.1 do not apply to those discharges or exceedances that are under the jurisdiction of an applicable permit when the substance in question is covered by the permit and death or acute injury or illness to animals or humans does not occur. In order for a discharge or exceedance to be under the jurisdiction of this NPDES permit, the substance in question (a) must have been discharged in the normal course of operation from an outfall listed in this permit, and (b) must have been discharged from an outfall for which the permittee has authorization to discharge that substance.

Changes to the Thermal Effluent Limitations

The Merom Generating Station consists of two (2) coal fired steam electric generating units with the total output capacity of 980 megawatt (MW). The primary wastewater discharge is to the reservoir consisting of a maximum daily discharge of 484 MGD of once through non contact cooling water. The lake was built in 1981 by Hoosier Energy for the purpose of providing makeup water and for cooling condenser wastewater for reuse at the generating station. The reservoir was created by building a dam within the Turtle Creek watershed and is therefore defined as a water of the state.

Hoosier Energy was granted a 316(a) Thermal Variance in 1978 from the requirement of meeting the Indiana temperature requirements in 327 IAC 2-1-6. The variance application required the applicant to demonstrate that the thermal effluent limitations required under section 301 and 306 of the Clean Water Act are more stringent than necessary to assure the protection of a balanced, indigenous community of shellfish, fish, and wildlife in and on the receiving water. In this case,

the application and subsequent approval was based upon predictive studies that included literature evaluations and thermal modeling. As part of the variance approval, Hoosier Energy was required to conduct annual biological studies to confirm the accuracy of the predictive studies and modeling.

IDEM and IDNR have reviewed temperature data and biological data submitted by Hoosier Energy over a period of years. Based upon this review, IDEM has determined that the existing 316(a) does not comply with the requirements of 327 IAC 5-7 and therefore will not renew the 316(a) variance.

Thermal limits are required because the prior 316(a) variance is not being renewed. A three (3) year compliance schedule has been applied for and is considered appropriate for meeting the water quality based temperature limits.

Permit Processing / Public Comment

Pursuant to IC 13-15-5-1, IDEM will publish a general notice in the newspaper with the largest general circulation within the above county. A 30-day comment period is available in order to solicit input from interested parties, including the general public. Comments concerning the draft permit should be submitted in accordance with the procedure outlined in the enclosed public notice form.

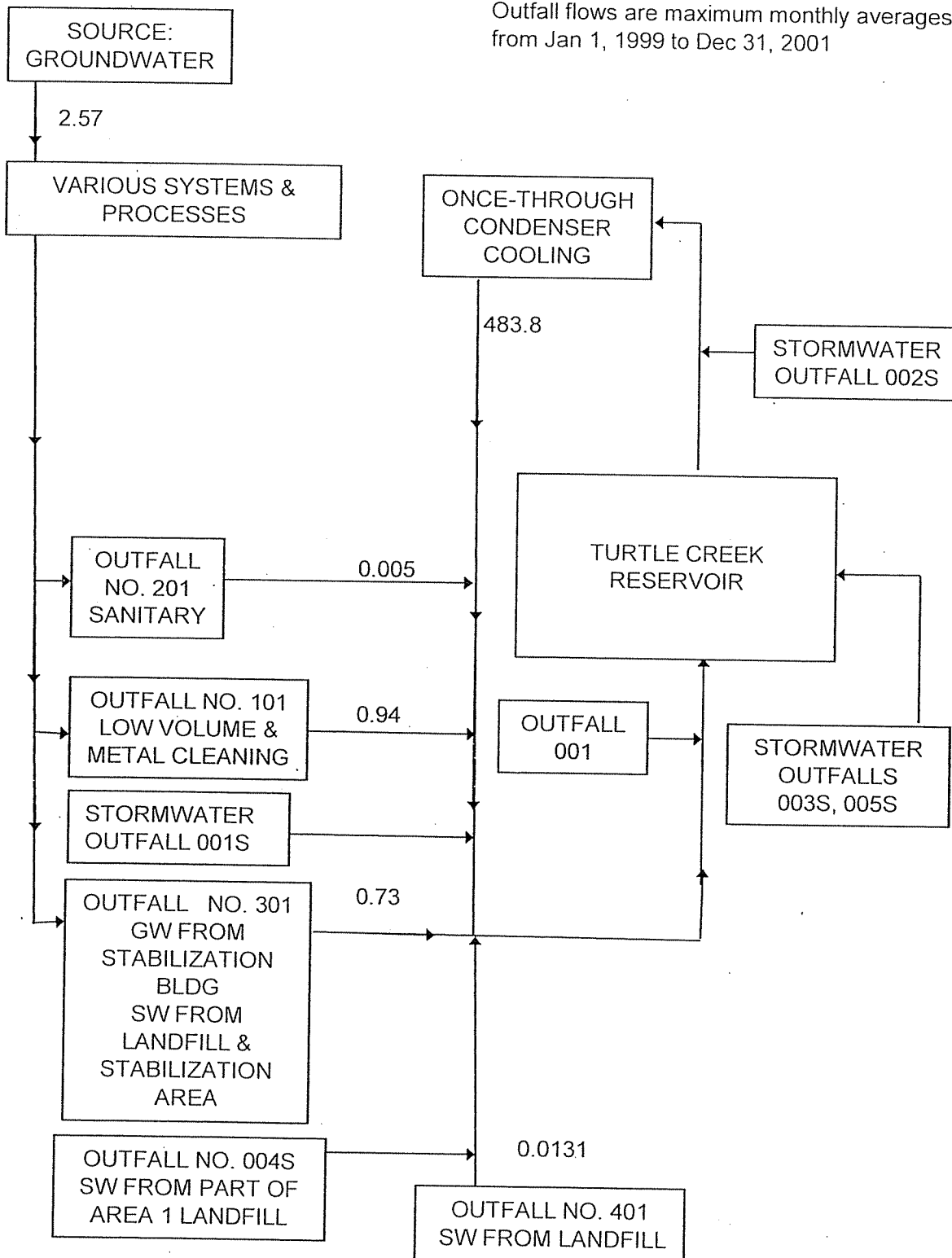
Attachment I	Water Balance Diagram
Attachment II	Topographic Map of Facility and Reservoir
Attachment III	Topographic Map of Facility and Reservoir

Prepared by George Oliver

Attachment I

Note:

Outfall flows are maximum monthly averages from Jan 1, 1999 to Dec 31, 2001



Prepared for:



HOOSIER ENERGY
RURAL ELECTRIC COOPERATIVE

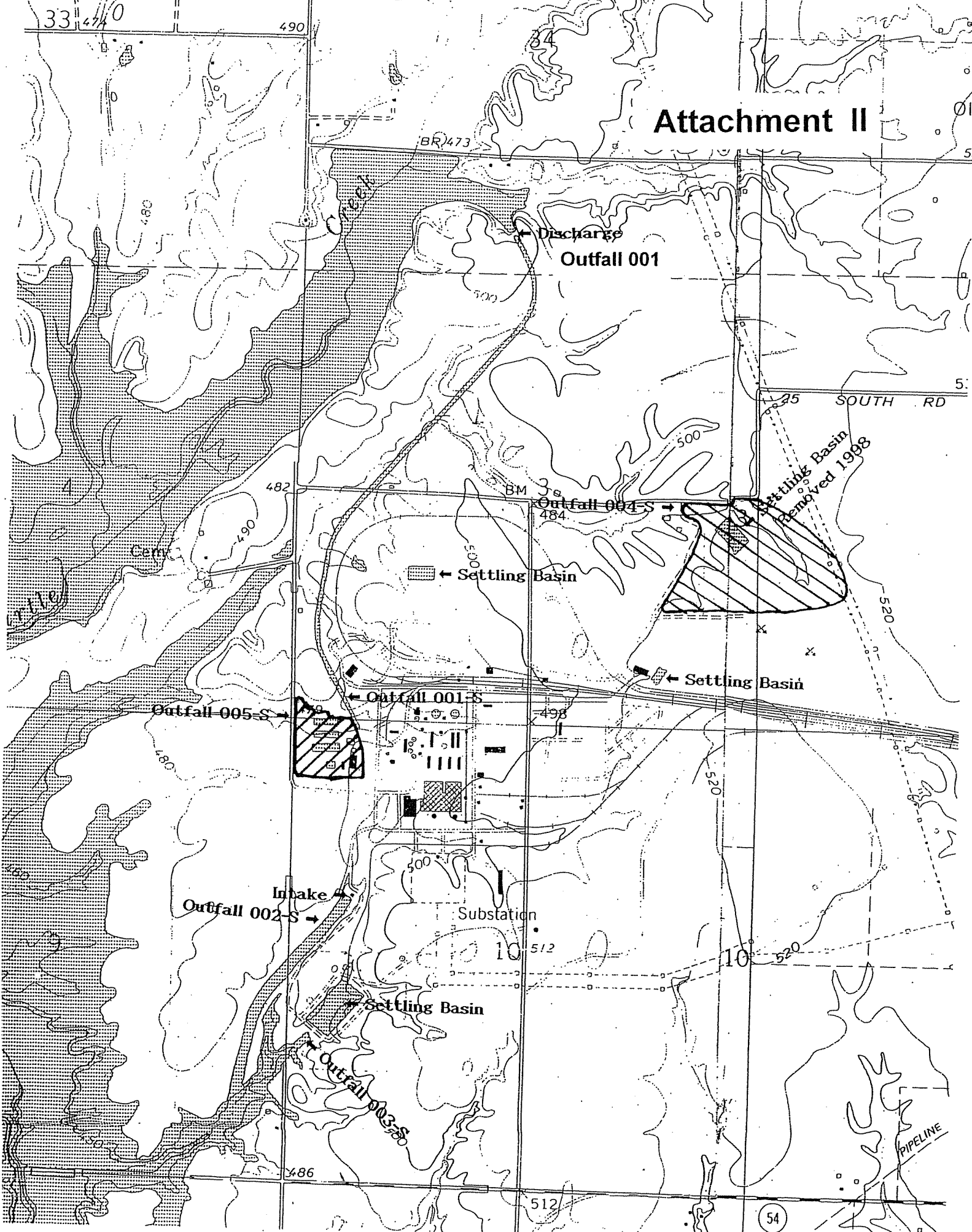
Prepared by:



The **ADVENT** Group, Inc.

ATTACHMENT II.A
NPDES NO. IN0050296
FLOW DIAGRAM

Attachment II



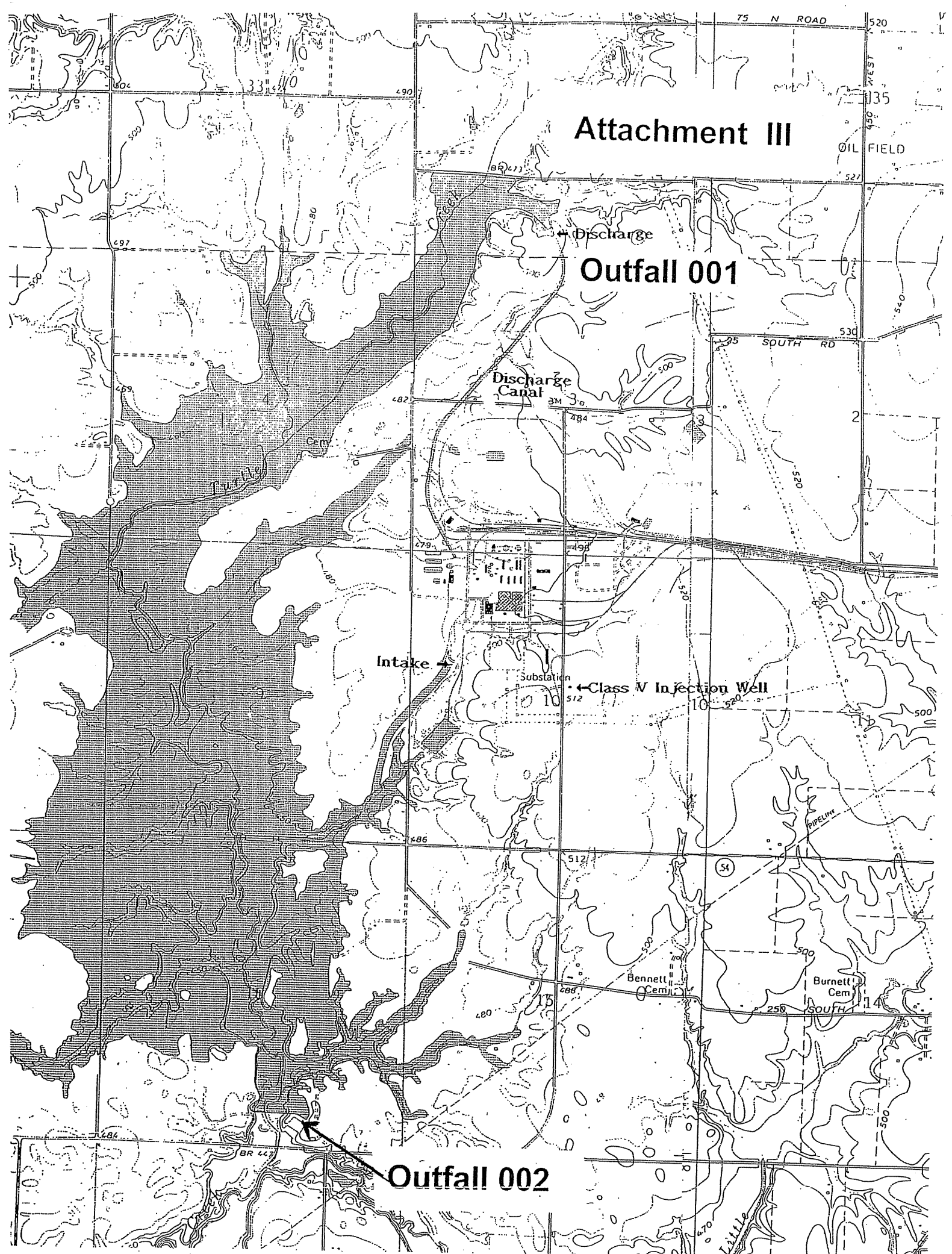
Attachment III

Outfall 001

Intake

Substation ← Class V Injection Well

Outfall 002



STATE OF INDIANA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

PUBLIC NOTICE NO. 2010- 8C - RD

DATE OF NOTICE: AUGUST 19, 2010

DATE RESPONSE DUE: SEPTEMBER 20, 2010

The Office of Water Quality proposes the following NPDES DRAFT PERMIT action:

MINOR – RENEWAL

HOOSIER ENERGY – MEROM GENERATING STATION, Permit No. IN0050296, SULLIVAN COUNTY, 5500 Old SR 54 W, Sullivan, IN. This industrial facility discharges 484 million gallons daily of process, non-contact cooling water, sanitary wastewater and storm water into Turtle Creek Reservoir & Turtle Creek. Permit Writer: George Oliver at 317/232-8702, goliver@idem.in.gov. Published in Sullivan Times.

PROCEDURES TO FILE A RESPONSE

Draft documents are available for inspection at IDEM, Office of Water Quality, 100 N. Senate Av, Indianapolis, IN - 12th floor (east end elevators) from 9 – 4, M - F, (copies 10¢ per page). A copy of the Draft Permit is on file at the local County Health Department. Please tell others you think would be interested in this matter. See these sites for your rights & responsibilities: <http://www.in.gov/idem/5474.htm> ; Public Participation: <http://www.in.gov/idem/4172.htm>; Citizen Guide: <http://www.in.gov/idem/5803.htm>.

Response Comments: The proposed decision to issue a permit is tentative. Interested persons are invited to submit written comments on the Draft permit. All comments must be postmarked no later than the Response Date noted to be considered in the decision to issue a Final permit. Deliver or mail all requests or comments to the attention of the Permit Writer at the above address, (mail code 65-42 PS).

To Request a Public Hearing:

Any person may request a public hearing. A written request must be submitted to the above address on or before the Response Date noted. The written request shall include: the name and address of the person making the request, the interest of the person making the request, persons represented by the person making the request, the reason for the request and the issues proposed for consideration at the hearing. The Department will determine whether to hold a public hearing based upon the comments and the rationale for the request. Public Notice of such a hearing will be circulated in at least one newspaper in the geographical area of the discharge and to those persons submitting comments and/or on the mailing list at least 30 days prior to the hearing.